Devoted to
TEXTILE
CHEMISTRY
BLEACHING
DYEING
PRINTING
FINISHING

AMERICAN DYESTUFF REPORTER

FEBRUARY 24, 1947
VOLUME 36, No. 4

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MAR 14

Ponsol*

Golden Orange 3G Paste

On all forms of cotton and viscose-process rayon . . . for playsuits, wash dresses, work clothes, uniforms, draperies, and upholstery fabrics . . . "PONSOL" Golden Orange 3G Paste produces rich yellowish shades. It is also important as a shading element for producing khakis, browns, and olives. Resistance to severe washing, chlorine, and light is very good. "PONSOL" Golden Orange 3G Paste can be applied by conventional methods in all types of dyeing equipment and also by the Du Pont Pad-steam Continuous Dyeing Process. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Div. Wilmington 98, Del.

*Reg. U. S. Pat. Off.

Du Pont Dyestuffs

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DUPONT

OFFICIAL PUBLICATION
of the
PROCEEDINGS
AMERICAN ASSOCIATION
OF TEXTILE CHEMISTS
AND COLORISTS

CHEMICAL RESEARCH *for Fabric Perfection*

FORMASETS

Formasets, synthetic resin finishes for textiles, are again available without restriction. Several new types developed as a result of Warwick's war-time research have been added. Each Formaset has its particular advantages designed to solve specific finishing problems. Warwick technical advisors will gladly work with you in determining the correct Formaset for your needs.

WARWICK CHEMICAL COMPANY

A Division of Sun Chemical Corporation

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Levelene

NEW....IMPROVED
LEVELENE

the four-way dye-house assistant

- A LEVELING AGENT
- A PENETRANT
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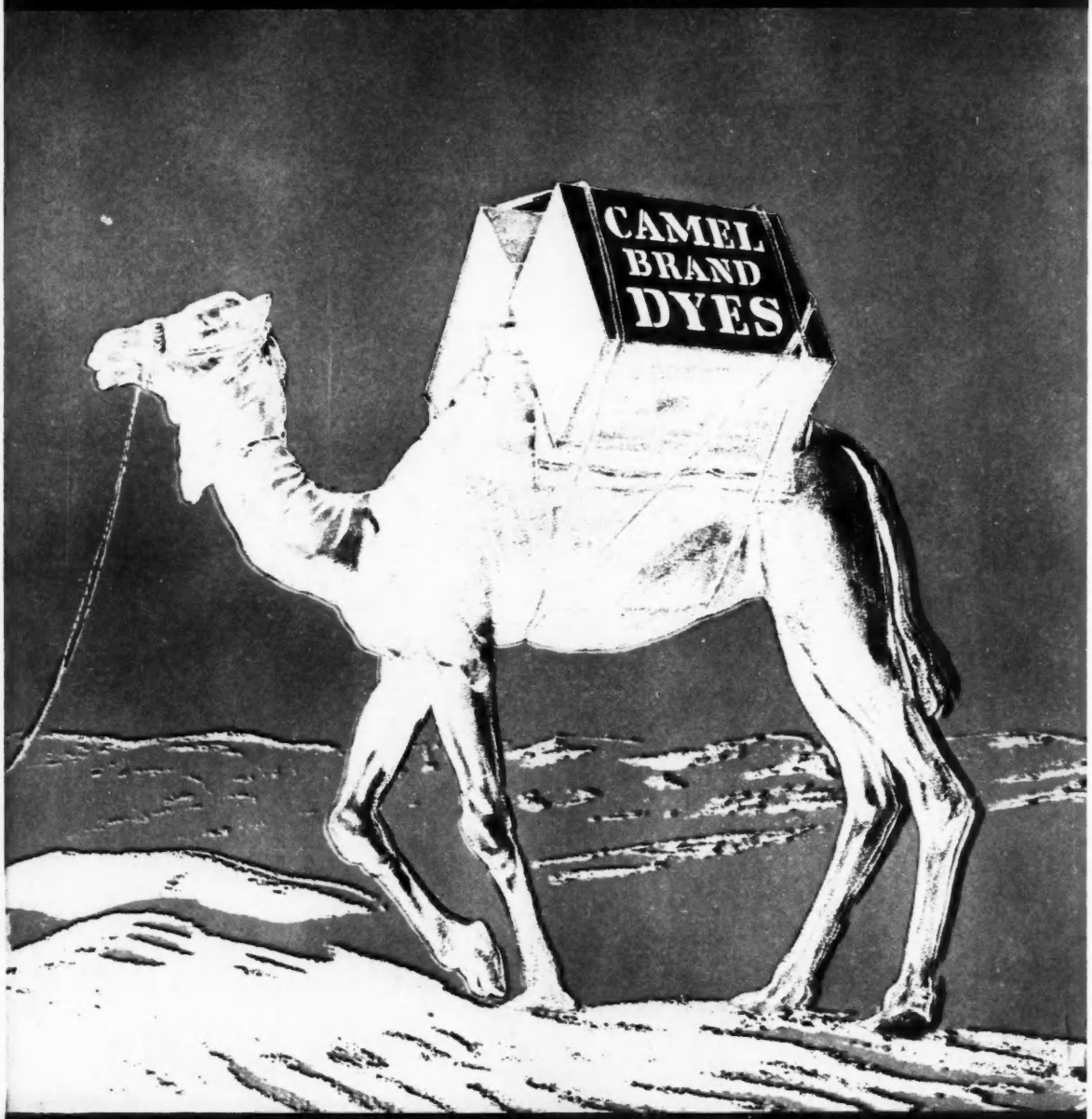
QUALITY DYESTUFFS

SINCE 1878



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BRANCH OFFICES AND WAREHOUSES:

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PALATINES for wool

PALATINE FAST DYESTUFFS

...offer the lowest coloring costs for quality results.

...have chrome color fastness (without the addition of chrome) by simple acid dyeing process.

...are fast to light, washing, perspiration, crocking, sea water and wear.

...are level dyeing on mixed wool and carbonized goods without neutralization—with excellent penetration. Most types are dischargeable with Rongalite.

...are particularly suitable for men's wear, dress goods, gabardines, tropical worsteds, cloakings, bathing suits, knitting yarns, carpet yarns and tops.

...on Nylon give maximum fastness to light and washing. The method of application is simple and the results are excellent.

GDC

more production with less manpower

GENERAL DYESTUFF CORPORATION

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a striking FINISH!

In textiles as on the alley . . . it's the *finish* that counts. To meet today's competitive conditions your product must look well . . . have a "striking" appearance.

For finishing nylon, silk, rayon, wool, or cotton . . . or any mixture . . . Fancourt can provide the correct formula. If you want to chalk up a new high on your sales chart it will pay you to call on Fancourt.

Liquasol

For scouring and dyeing of Nylon. Gives clear and level shades. Prepares hose for resin finishing.

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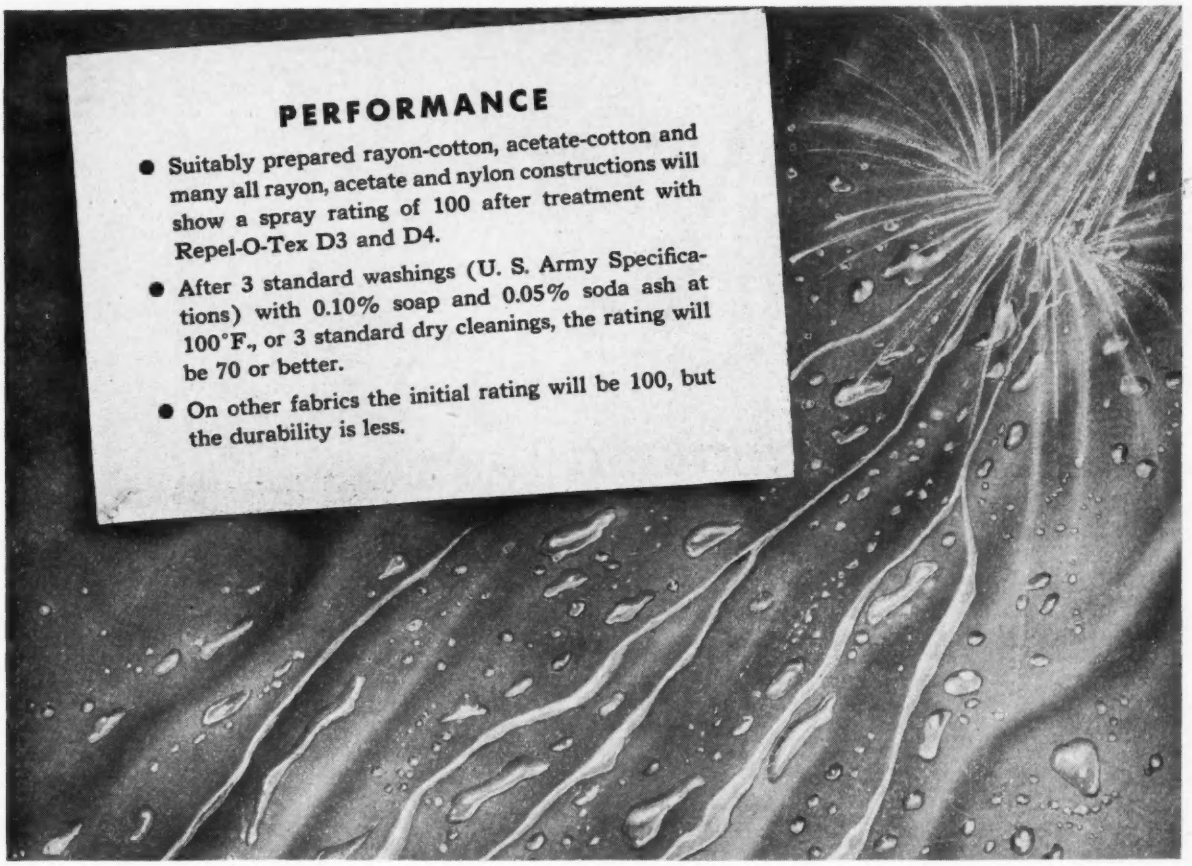
Solving Finishing Problems Since 1904



PERFORMANCE

- Suitably prepared rayon-cotton, acetate-cotton and many all rayon, acetate and nylon constructions will show a spray rating of 100 after treatment with Repel-O-Tex D3 and D4.
- After 3 standard washings (U. S. Army Specifications) with 0.10% soap and 0.05% soda ash at 100°F., or 3 standard dry cleanings, the rating will be 70 or better.
- On other fabrics the initial rating will be 100, but the durability is less.

For Durable . Low Cost Water Repellency ... Use REPEL-O-TEX D3 & D4

THESE two complementary materials, used in combination, give exceptionally durable water repellency at a cost that is much less than that of any other durable treatment. Easy to apply in jig, pad or quetsch, *the treatment requires no curing or scouring.* The finish is also stain- and perspiration-resistant.

Any required hand or finish may be obtained by suitably varying the proportions of Repel-O-Tex D3 and Repel-O-Tex D4.

We'll be glad to arrange for a trial run.

PROPERTIES

Repel-O-Tex D3 is a stable, creamy white liquid dispersion. Repel-O-Tex D4 is a stable, light bluish green solution.

Mixtures of Repel-O-Tex D3 and D4 are stable at temperatures up to 158°F. (70°C.) for one hour. At 122°F. (50°C.) they are stable for five hours. Mixtures are readily soluble in water, and are compatible with hard water. Cloth to be treated should be free of cationic softeners. sizes and detergents.

onyx

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NYANZA

ANILINE & ALIZARINE COLORS

•

TEXTILE CHEMICALS

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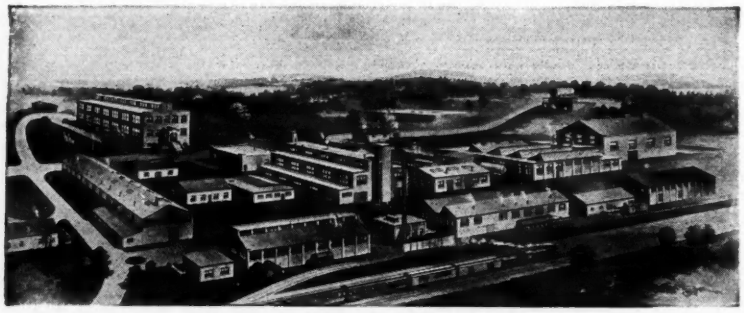
FINISHING MATERIALS

FOR

WOOL — COTTON — RAYON — ACETATE

AND MIXED FIBERS



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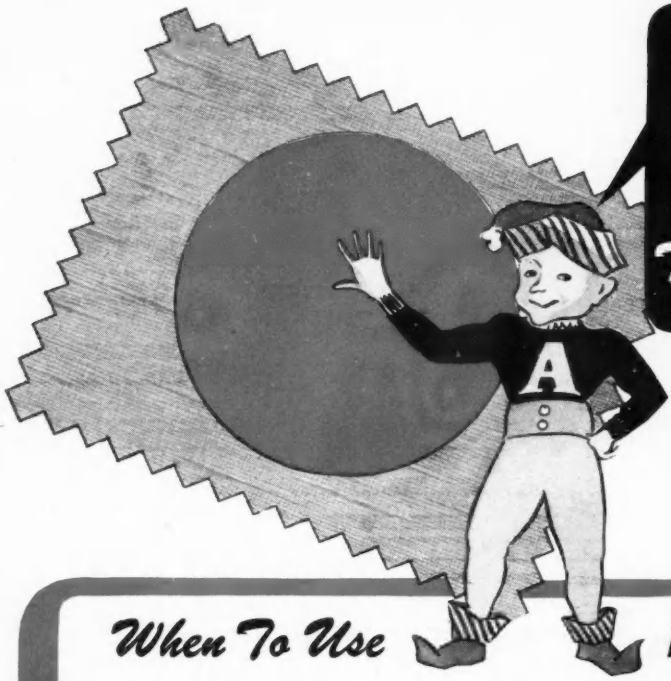
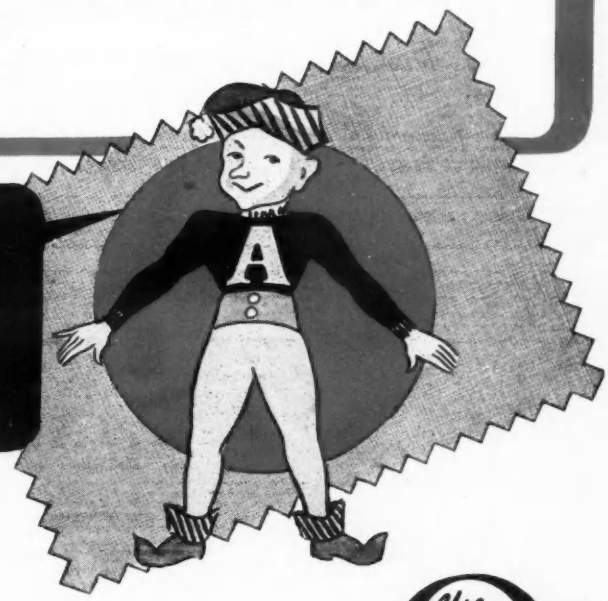


"I FIX COLORS TO STAY *The Name's* ATCOFIX D!"

"I'm a concentrated and stable solution and the ATCO laboratory designed me especially to **FIX COLORS!**"

When To Use ATCOFIX D

1. After treatment of direct dyed ground colors which are to be discharge printed, to prevent bleeding into white.
2. To increase fastness to water or perspiration and prevent bleeding of direct color prints or discharge prints, also direct and acid color prints on rayons.
3. On screen prints to improve the fastness to creeping while in the wet state.
4. For cross dyeing to improve the fastness of colors to weakly acid or neutral cross dyeing.
5. For eradication of bronzing of sulfur colors.



"I STOP Atmospheric Fading on Dyed Cellulose Acetate Fabrics!" *"Call me* ATCO GF"

"I'm a clear, colorless, odorless liquid, safe to handle, and readily soluble in hot or cold water."

"I got my start in the famous ATCO laboratory, too!"

ATCO'S *technical department will be glad to make further suggestions on both these products and will gladly perform tests with both on any of your fabrics.*

Use ATCO Products

Atlantic Chemical Co., Inc.

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If you have a processing problem—let Hart research give you the benefit of this long mill experience. Write today for full information on Hartex Products or send for a Hartex Specialist to go over processing problems with you.

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Rayon Oils & Sizes	Delustrants
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Hart Products

based on research

THE SYMBOL OF TECHNICAL ACHIEVEMENT

VELVAMINE K-90

An improved softening and finishing agent for use on all types of fabrics. It imparts an odorless finish which is resistant to washing and dry cleaning. Can be used as a substitute for sulphonated oils, tallows and other softeners. Its use eliminates yellowing and rancidity often encountered with the usual fatty type of softening agents.

PERMALENE WS

A white powder soluble in water at 80° F. Capable of dispersing iron, calcium and magnesium salts and redissolving or re-dispersing precipitated compounds of these metals. It is so highly buffered that the pH of its solution is practically independent of its concentration.

PERMALENE SOL

A penetrant and cleanser designed for use on all fabrics especially those that are tightly woven and highly twisted. Recommended for pad-dyeing where it insures uniform and thorough penetration. It is of great assistance where low temperature dyeings are necessary. Non-foaming at high speeds, it is stable in neutral, alkaline and acid solutions.

VELVAMINE GF

Velvamine GF is a blend of amines and softeners designed to protect acetate colors from gas or fume fading. It resists removal by drycleaning and, when used on mixed fabrics, has a minimum effect on the shade and light fastness of the direct colors. Velvamine GF produces a soft, full hand and does not affect the appearance of the treated fabrics.

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A highly concentrated soluble synthetic ester

CORASIL RT is an ideal softener for gelatin used in crepe soaking and warp sizing operations • It promotes even twisting and protects the yarn against undue tension and mechanical strains of weaving • During boil-off this product releases the twist evenly and a satisfactory

Uniform Pebble is Assured

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CORASIL RT merits your immediate investigation.

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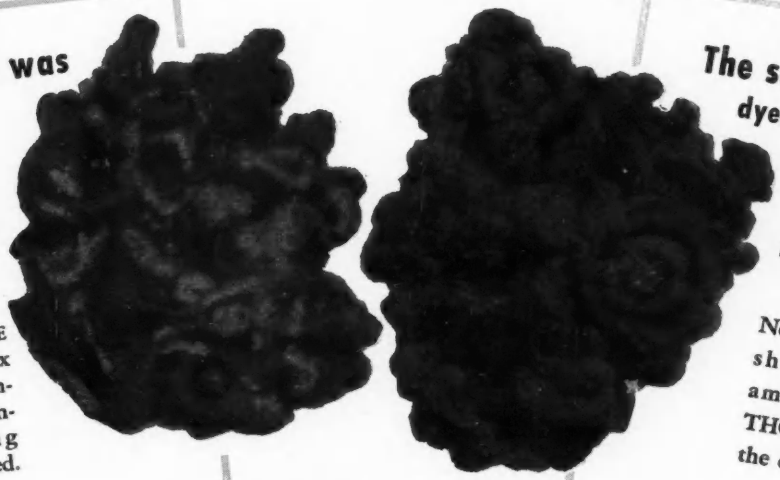
TIPPY WOOL ?

This wool was dyed in the ordinary way

An ACID BLUE (Color Index No. 208) considered an uneven dyeing color, was used.



The same wool— dyed with the same color, but with the aid of ANTHOMINE

Note the uniform shade. A small amount of ANTHOMINE made the difference.

TRY ANTHOMINE !

(PATENT APPLIED FOR)

TO ELIMINATE UNEVEN DYEINGS

. . . QUICKER AND BETTER EXHAUSTION OF THE DYEBATH

. . . A SOFTER, MORE PLEASING "HAND"

. . . SUBSTANTIAL INCREASE IN COLOR YIELD

. . . NO SACRIFICE OF BRIGHTNESS OR FASTNESS

. . . PROCESSING TIME REDUCED

Although it has only recently been released for general sale, ANTHOMINE has been used and tested by many mills for more than a year. Colors and wool with tendencies toward uneven and tippy dyeing were especially selected for testing.

The results of actual mill use of ANTHOMINE in dyeing stock, yarn, or piece goods confirmed the hundreds of tests made in our laboratories.

Thus, ANTHOMINE is now offered to the trade as a tried and tested solution to the tippy wool dyeing problem with an assurance born of complete success in dyehouse.

Write for Technical Service Bulletin No. 203.100.1

Arkansas Co. INC.

Manufacturers of Industrial Chemicals for Over 40 Years

NEWARK, NEW JERSEY

Vanesta

A *NEW* Starch Stabilizer

Stops Gelling

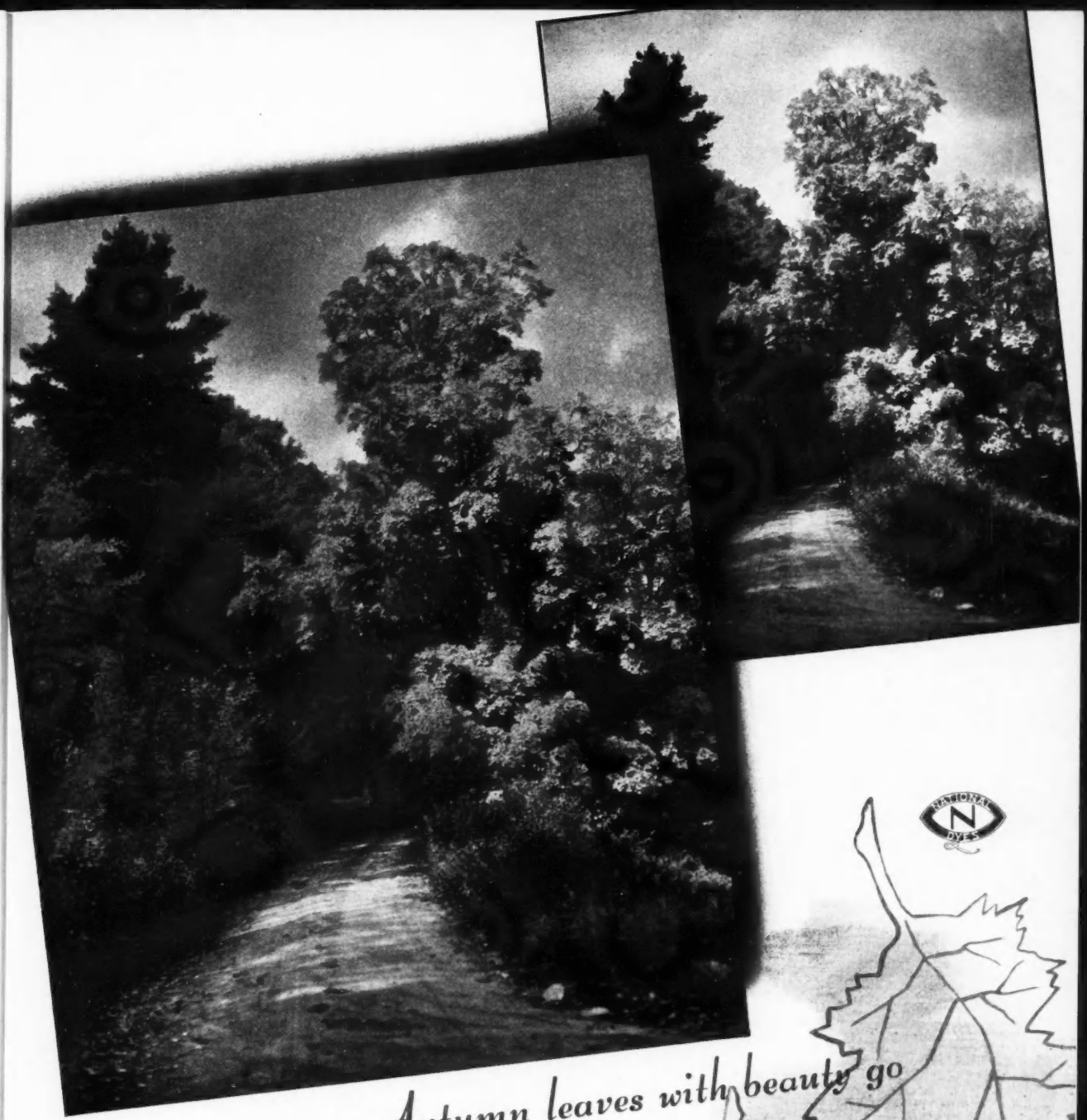
Improves Flow

Gives Uniform Consistency

Sample on request

R. T. VANDERBILT CO., INC.

230 Park Avenue, New York 17, N. Y.



. . . Autumn leaves with beauty go

Without color, Autumn's pageant becomes just another landscape. Without color, textiles too would be dull lifeless goods. Add color . . . and they become dramatic merchandise . . . with endless profit possibilities.

National Aniline knows color . . . knows its formulation, manufacture and application . . . knows its effective use from the longest and broadest experience in every field where color is used.

For uniform and dependable results, always specify National Dyes.

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DIVISION OF
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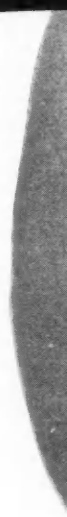

Execut
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pler, I
printin
Colors.

Thou
tern w
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ninon

*Reg. U.

HOW

WOULD YOU PRINT THIS PATTERN ON ALL ACETATE NINON ?

Executives of the Colonial Print Works Division of Brewster Finishing Company knew there would be grave danger of cracking the fabric if they attempted to print this pattern with vat dyes in starch on acetate ninon. Therefore, they chose the far simpler, less hazardous method of pigment printing with low-crock Aridye* Pigment Colors.

Thousands of yards of this attractive pattern were printed in each of the four color combinations illustrated with no cracking or other damage to the delicate acetate ninon fabric, and with no impairment of the hand. Typical of the procedure followed by Colonial is that for the wine, rose, and grey color combination shown above. Formulas for that color combination are: WINE —2 parts Aridye Red 4325; 1 part Aridye Violet LV3R 4610; cut 1½: 1 with Aridye Clear 6214. ROSE—1 part Aridye Red 4325; 1 part Violet LV3R 4610; cut 1:9. DARK GREY—3½ parts Aridye Black FK 4214; 4½ parts Aridye Blue LC2R 4724; cut 1:6. LIGHT GREY—6½ parts Aridye Black FK 4214; 9½ parts Aridye Blue LC2R 4724; cut 1:45.

After printing, the fabric was merely dried and finished. Note the brilliancy of shades and sharpness of mark. Fastness to washing, drycleaning, sunlight, and crocking met or exceeded all requirements.

Because of results such as these, Colonial and other progressive printers are turning more and more to the use of Aridye Pigment Colors. An Interchemical technical representative may be able to help you solve your printing problems. Write to Interchemical Corporation, Textile Colors Division, Fair Lawn, New Jersey.

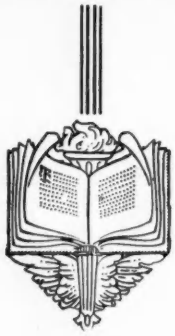
*Reg. U. S. Pat. Off.

CHECK THESE EIGHT ADVANTAGES

Sharpness of Mark • Exceptional Fastness to Sunlight
Uniformity of Shade • Fastness to Washing
Bright Colors • Economy
Ease of Application • No Impairment of Hand

Aridye *Pigment colors*

INTERCHEMICAL CORPORATION • TEXTILE COLORS DIVISION, FAIR LAWN, N. J. • ROCK HILL, S. C. • PROVIDENCE, R. I.



Announcing The 38th
KNITTING ARTS EXHIBITION

Auspices

NATIONAL ASSOCIATION of HOSIERY MANUFACTURERS

ATLANTIC CITY AUDITORIUM

April 29th thru May 2, 1947

For the entire knit goods trade, the KNITTING ARTS EXHIBITION is the greatest of all meeting places for buyer and seller. Under one roof is concentrated the best creative thought of the industry — the new trade-stimulating ideas and designs, the latest developments in equipment and methods.

The industry's leading manufacturers of knitting, dyeing and drying machinery, mill supplies, yarns, allied products and services, will exhibit their latest designs, processes and mechanical features.

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93% OF THE EXHIBITORS REPEAT YEAR AFTER YEAR.

For them it is the most economical and effective means of demonstrating their products to the entire knitting trade in one place at one time. They measure the value of the Exhibition by the results—and come back every year. The leading manufacturers will be there this year. You cannot afford to stay away.

* * * *

The price of a space 100 square feet is only $200, including backwall, side partitions, desks, chairs, rug, hat tree and booth sign.

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Textile Resin Topics

*Lanaset** RESIN-TREATED WOOL
...NOW IN FASHION-FAMOUS STORES

Fashion-famous stores from coast to coast are now offering LANASET* Resin-treated washable woolen apparel. LANASET is a sure stimulus to sales, since it makes it possible to offer the consumer woolen apparel which is shrinkage-controlled and which will retain its fit and texture throughout repeated hand-launderings.

Woolen manufacturers are also assured of increased sales once they put washability into their fabrics with LANASET Resin. Our Technical Staff is available for adapting present fabrics or developing new fabrics in order to obtain best results with LANASET.

AMERICAN CYANAMID COMPANY
TEXTILE RESIN DEPARTMENT

BOUND BROOK, NEW JERSEY

New York • Chicago • Boston • Philadelphia • Charlotte • Providence

LANASET RESIN • SHEERSET* RESIN • AEROTEX† SOFTENER H • LACET* RESIN • PERMEL* RESIN*

**Reg. U. S. Pat. Off.* *†Trademark of American Cyanamid Company*

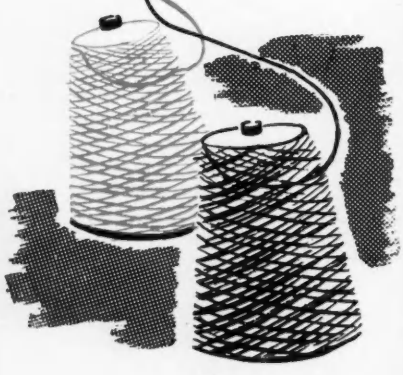
Stanteosine

CATIONIC SOFTENER

STANTEOSINE is a mill tested product giving extreme softness using small amounts. Its affinity for fibers gives it greater permanency than other types of softeners.

STANTEOSINE is stable in hard water and in solutions of calcium, magnesium and other salts, making it very adaptable for heavy finishes, especially where weight is desired. It can be used over a wide pH range.

STANTEOSINE has various applications in the processing of silk, nylon, rayon, acetate, cotton and wool fabrics and all types of mixed goods. In the finishing of piece goods, and as a rinse after dyeing on raw stock, yarns and piece goods, STANTEOSINE gives a soft, silky hand without fear of odor developing on storage.



STANDARD CHEMICAL PRODUCTS, Inc.

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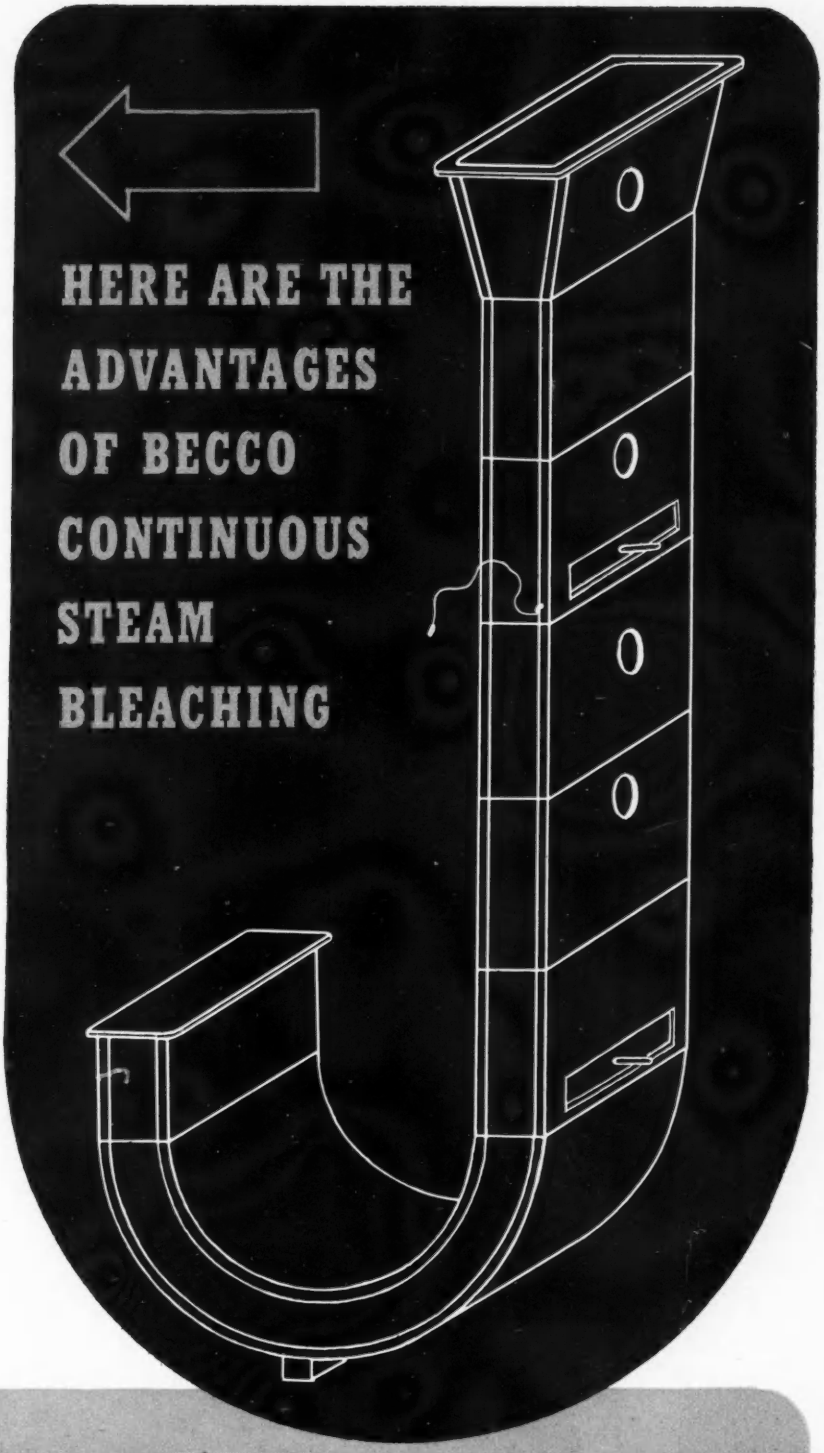
HIGH POINT, N. C. · CHATTANOOGA, TENN. · ANDOVER, MASS. · PROVIDENCE, R. I. · PATERSON, N. J. · SACRAMENTO, CAL.

HERE ARE THE ADVANTAGES OF BECCO CONTINUOUS STEAM BLEACHING



● With the Becco Continuous Steam Bleaching System there is a substantial saving in equipment because two "J" Boxes will do the equivalent work of nine kiers. There is a saving of up to 55 per cent in floor space. Savings in steam up to 75 per cent are effected. In kier boiling, if the bleach is unsatisfactory, there is a time loss of 18 to 24 hours. In the Becco system, inspection windows in the "J" boxes permit checking at any stage and each yard of goods is bleached in approximately two hours. Savings up to 40 per cent in the cost of chemicals and labor are achieved.

Remember, too, that Becco Hydrogen Peroxide is easy to handle. Shipped in tank cars or drums, it can be pumped quickly and directly to the point of use.

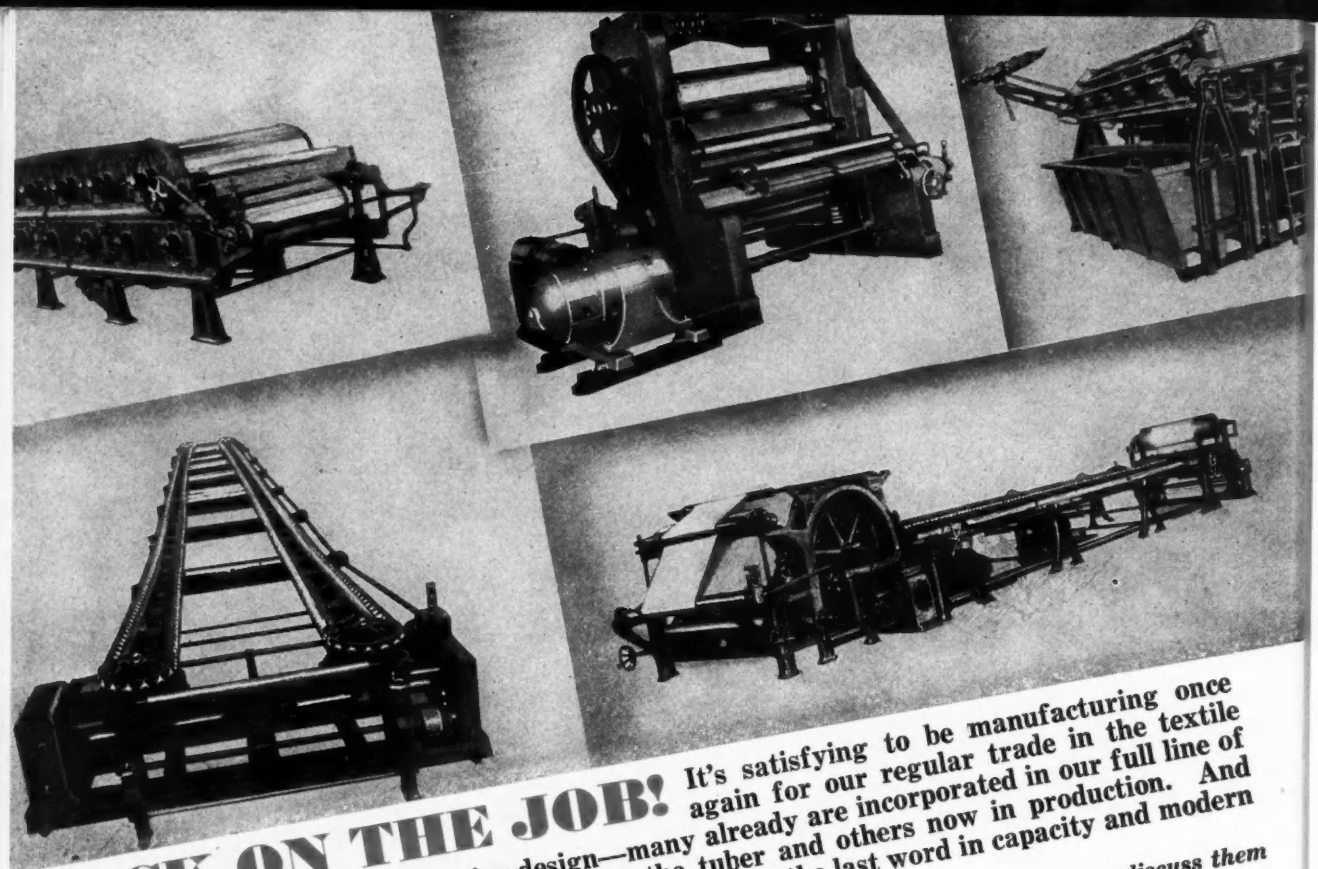
Becco Engineers and Chemists have had many years of specialized bleaching and processing experience. Why not request that they make a survey of your plant and advise as to the most efficient method of bleaching for you to use, regardless of the volume of textiles bleached? You will be under no obligation. Simply write to:

BECCO SALES CORPORATION

AGENTS FOR BUFFALO ELECTRO-CHEMICAL COMPANY, INC.

2 Sawyer Avenue, Buffalo 7, N. Y.

New York Boston Philadelphia Chicago Charlotte



BACK ON THE JOB!

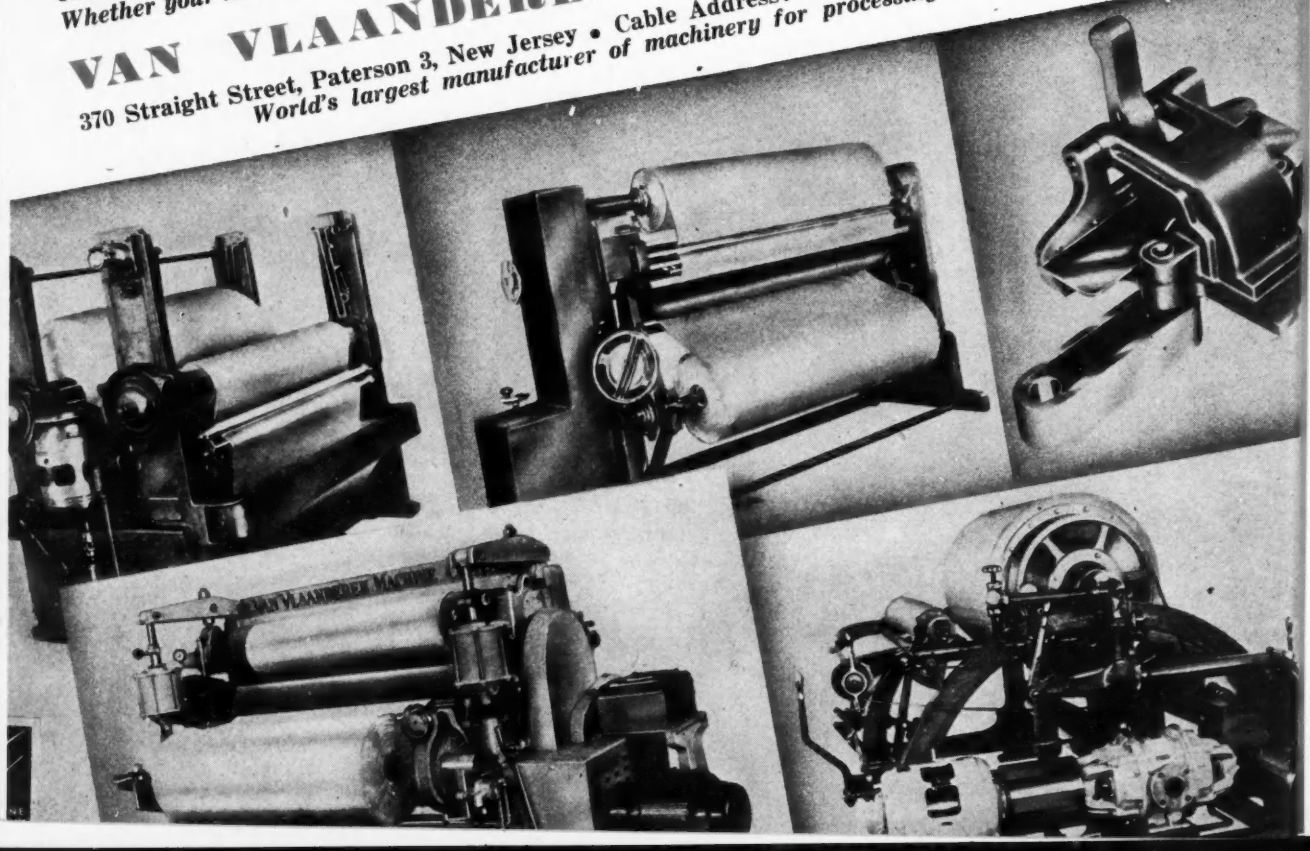
It's satisfying to be manufacturing once again for our regular trade in the textile field. We've new ideas about machine design—many already are incorporated in our full line of equipment. For instance: the tensionless jig, the tuber and others now in production. And we've an entirely new heavy-duty tenter for those who want the last word in capacity and modern construction.

Whether your needs are for one machine or a complete plant installation, we will be happy to discuss them with you.

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey • Cable Address: VLAANDEREN, PATERSONNJ, U. S. A.

World's largest manufacturer of machinery for processing modern fabrics



Ambertex FOR TEXTILE PRINTING

sharp in detail and color

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Dinner Honoring Corporate and Charter Members

Silver Jubilee Convention, Hotel Statler, Boston, Mass. December 12, 1946

GEORGE O. LINBERG
Chairman

PERCIVAL THEEL
Toastmaster

CHAIRMAN LINBERG: Ladies and Gentlemen: On behalf of the Northern New England Section, it is my extreme pleasure to greet you with a hearty welcome to this, our Silver Jubilee Convention. We hope that this convention will meet all your expectations, and that you will profit thereby and be happy that you came to our fair city.

It is almost impossible to keep from reminiscing at this time, but that department will be covered expertly in full by P. J. Wood. However, we may point with some pride to our accomplishments over the last twenty-five years, but, as "Pride goeth before a fall" I want to read to you something you have no doubt read—"The Purpose of the Convention."

Purpose of the Convention

This Silver Jubilee of our Association calls for a review of our progress since its inception, but more important, it calls for our pledge to the future. The twenty-five years now ending have given us a scientific knowledge in textiles, allied products, their application and uses. We have learned that we are only beginning our quest for knowledge, and the future challenges us to improve and develop our processes and products.

This convention is dedicated to a dual purpose: the dissemination of knowledge applicable to textiles through intelligent research, and the celebration of the founding of the Association in Boston in November, 1921.

We have become of age. We have the privilege of voting, as it were, and are ready, willing and able to take upon ourselves the duties and privileges of adults. We review the past, review it briefly, but focus our attention on the future, its responsibilities and its needs. We have come only a short way for much is left to be done, and in the doing of it, we must lean heavily on the young people coming along. Our responsibility to the textile institutions of encouragement, help and financial aid is a challenge to this parent body and its members. We cannot hide this responsibility in the excuse that we are fully occupied with our work. A firm foundation in any organization is the replacement of the vacancies left throughout the years, by young people, helped throughout their training period by those with years of experience.

Our committee appointments should bear in mind this admittance of the younger and untried members of this organization for development of future leaders in this Association as well as the industry as a whole.

It is because of our twenty-fifth annual meeting that we have laid stress at this dinner on both charter and corporate members, the charter members because they are the oldest in our organization, and the corporate members because they are the youngest.

I should like to have the charter members arise at this time.

[The charter members rose and there was prolonged applause.]

We have representatives of our corporate members, and they are not asked to arise, although their number now exceeds our charter members. It would really be fitting, however, if we could have in attendance at this convention, those interested in the textile industry and its progress who are *not* corporate members. We have need for more corporate members and all corporations, as well as individuals, interested in textile development can only benefit by membership in the American Association of Textile Chemists and Colorists.

The work entailed in the preparation of a convention such as this one is monumental and of utmost importance. To adequately express thanks to all the committee chairmen and their members is almost futile, for the members only could work as hard and long as they have in a labor of love. I will have more to say about that on Saturday night, for tonight we are on the threshold of this convention and of the work that has been done.

In our technical program, we have departed somewhat from the past in that our papers are fewer, lengthier and practically in two sections. We have taken wool, cotton and synthetics and approached them from two angles, distinct and separate with no over-lapping, and yet intimately related. We have papers from the fundamental aspects and applied aspects on the basic raw materials of the textile industry. We are curious as to your reactions of this method of technical paper presentations.

Our exhibits, quartered in separate rooms from the meeting place itself, places stress on the developments of textile testing throughout the last quarter of a century with particular emphasis on the work of our own Association.

We hope that you have a good time and we welcome comments on any and all phases of this convention so that we, in turn, may pass this on to future committees to improve and enhance our annual national conventions.

As suggested in my opening remarks, and expressed at our Victory Convention by the General Chairman, Emmett Driscoll, this national convention is now large enough so that it requires the services of more than one section, and we have called on good friends from other sections for help. P. J. Wood from our New York Section is spotlighted tonight, as is Professor Percival Theel from our Philadelphia Section.

For the really heavy job of this corporate and charter members' dinner, it is my very great privilege to introduce to you our gracious toastmaster of the evening, Professor Percival Theel! [Applause].

Toastmaster Theel: Mr. Linberg, Charter Members and Corporate Members, Ladies and Gentlemen. May I start with a toast!

Welcome to all ye that are here,
Welcome, all and be of good cheer,
Welcome all another year!

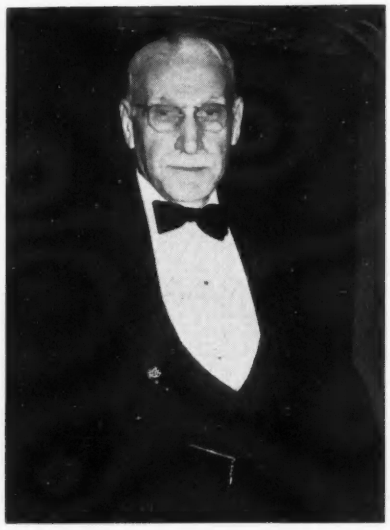
Now, it is my pleasure to present to you Albert E. Sampson.

Kenneth R. Fox

Walter J. Hamburger, Albert E. Sampson and John N. Dalton

William D. Appel

The Thursday evening Dinner at the Silver Jubilee Convention as seen by the camera of John E. Trezise Onyx Oil and Chemical Co.



Louis A. Olney

William H. Cady

George O. Linberg

P. J. Wood

Percival Theel

Presentation of Banner

Albert E. Sampson: Mr. Toastmaster, Officers of the Association, Fellow Charter Members, Fellow Members and Guests.

In New England, when the family has an anniversary, it is the custom of the members of the family, no matter where they may be, to come home. They come home that they may be seen and that they may be counted. They come home that, as a family they may view together their handiwork, and review together those affairs of the family upon which procrastination has laid a heavy and a delaying hand.

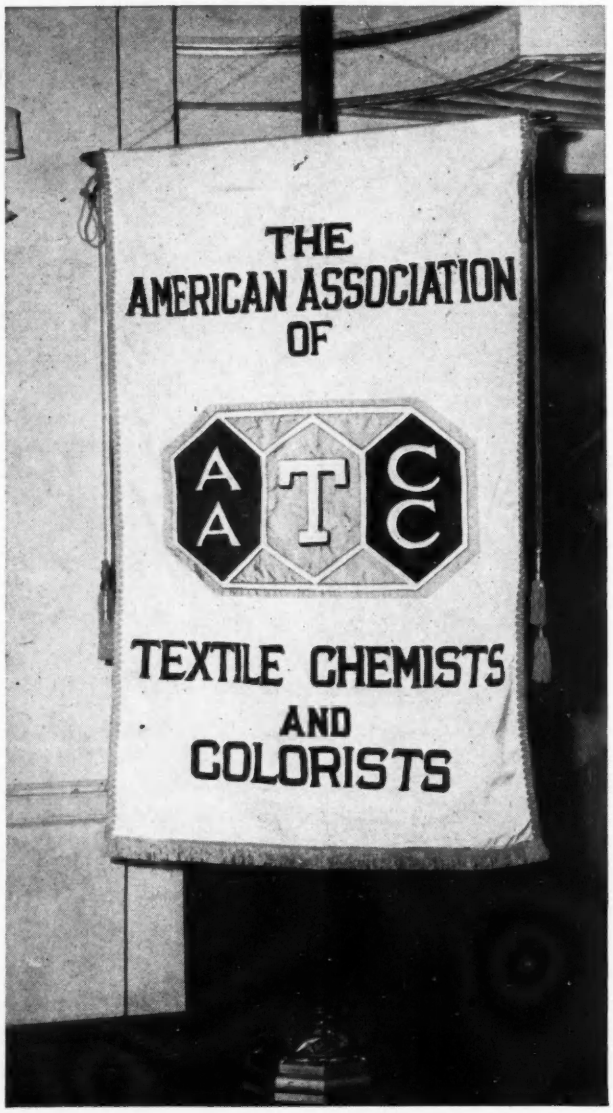
As the shades of evening draw down, in keeping with the custom, the more mature members of the family gather by the fireside and there, in the peace and the quiet of the home, they pay homage and give honor to its members.

This is your twenty-fifth anniversary! This is your home. Here, your Association was conceived. Here, she was born. Here, is the fireside that warmed her, and beside which she was nourished and guided during her infant years. You, the Charter Members, are the mature members of the family. Evening has come. In keeping with tradition, you have gathered by the fireside in the quiet of the home, to pay homage and give honor to your associates.

Home is also where the heart is, and in proof of that, your host, the Northern New England Section pays homage to the Association, and presents this banner, bearing the insignia of the Association, that all may know of the great esteem this Section has for the mother Association, and that all may know that upon this night we here drank deeply of a spirit mellowed and aged for a quarter of a century, the fine spirit of fellowship.

May this banner long stand in the halls of your conclaves and with dignity proclaim the unwritten motto of this Association. The motto that is:

"No man, no industry, no Association ever gets lost on a broad and a straight highway."



The new Banner of the Association which was presented at the dinner on Thursday evening.

Flag Presentation

There are family matters upon which we have procrastinated, and someone must attend to them. If we are to do them, we must do them now, for we are twenty-five years older, and the oil in the lamps of our generation is running low.

Here in this home, by this fireside, tonight we pay honor to the memory of those members of this Association who gave service above self when their country called; and made the supreme sacrifice that the tenets of their birthright, freedom, tolerance and equality might not perish from this earth.

If we are to perpetuate to eternity the glorious deeds and the unselfish spirit of these men in substance and material, that purpose must be served by the vision that inspired these men, by the ideals these men cherished and loved more than life itself; otherwise, they would not have given so willingly their lives for them.

There is but one symbol in this life that gives men the faith and the courage to answer its call, to serve its works and to die for it, as these members have done. A symbol that we love for what it is and what it represents in the life of a nation. A symbol that in the hour of victory we give to the breeze as an expression of our thankfulness; that, in the dark days we turn to its sheltering folds for protection. A symbol that attests the valor of our citizens in war, that is bathed in the blood of the best who have given their all for it.

That one symbol is Old Glory—the flag of our Country!

On behalf of the Charter Members of the Northern New England Section, and in the name of all the Charter Members of the Association, I present this Flag, "Old Glory," to the Association to commemorate the memories of these heroes of World War II.

I dedicate this flag to stand at the right at all future annual meetings of the Association.

May it always find this Association in the right and on the right! May it inspire all Association members to think right, to speak right, and to act in a manner that will reflect glory and prestige to her as these groups it commemorates have done.

President Appel, please accept, in the name of the Association, and from these donors, this Banner and this Flag, that they may serve in her name those purposes to which they are dedicated. [Applause]

President Appel: Mr. Sampson, it is a great pleasure for me to accept the Banner and the Flag in the name of the Council and all of the members of the Association. They will be treasured and used on all appropriate occasions.

Thank you and the Charter Members in the Northern New England Section for thinking of this splendid gift! [Applause]

Toastmaster Theel: Mr. Linberg asked me to act as the Toastmaster this evening, and he took a terrific chance. As you know, Professors have a peculiar habit of starting at the sound of a bell and talking about some subject that neither they nor the audience know anything about, or are interested in, and they continue on that subject until the sound of another bell one hour later or thereabouts. Therefore, so as not to commit this sin, I am reminded of the petition made by a minister who was asked to say a few words following a rather long introduction by a very long-winded toastmaster. He opened his remarks with this petition:

"O Lord, deliver us from all 'troducers and introducers'."

Now, it is first my pleasure to call upon Mr. Linberg and ask him to present the gentlemen at the head table.

George Linberg: It is a pleasure for me to do this. I will ask these gentlemen, as I call them by name, to arise, and will you please withhold your applause until they all have stood up.

Walter J. Hamburger, Assistant Chairman of this convention.

Albert Sampson, member of the Exhibits Committee.

John Dalton, Vice-Presidential nominee.

Rufus Hale, Pacific Mills.

Edward Chapin, Reception Committee Chairman

A. P. Howes, Publisher of the American Dyestuff Reporter.

Carl Draves, Past President.

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P. J. Wood, Past-President.

Elvin H. Killheffer, Past-President.

William H. Cady, Past-President.

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Hyman P. Selya, Chairman, Publicity.

Dr. Harold DeWitt Smith, representing corporate membership.

Dr. Milton Harris, Olney medalist.

Dr. Harold Chapin, National Secretary of the Association.

Alan Claflin, Presenter of Olney portrait.

Dr. Harold W. Stiegler, AATCC Research Director.

William Moorhouse, National Treasurer of AATCC.

Professor Kenneth Fox, President of Lowell Textile Institute.

Henry Herrmann, Nominee for President.

William Appel, President of AATCC.

Dr. Louis A. Olney, President Emeritus. [Applause]

Toastmaster Theel: Thank you, Mr. Linberg. Our first speaker of the evening is well known to us. While delving into the archives of this Society to assemble the material for this evening's history, Dr. Dawson's ghost unraveled a few skeletons. He mentioned to our Treasurer, Mr. Moorhouse, that some of the records gave him the "creeps." Mr. Moorhouse, since he has had the opportunity of handling more money, immediately bet our Historian that he could remain overnight in a certain haunted house. The challenge was accepted. Nightfall found our Historian entering the haunted house, and, to prevent ghosts from appearing, built a fire in the fireplace, locked all the doors and windows and stuffed the keyholes; then he started to work on the archives. Three ghosts appeared. He sang some hymns. The ghosts still remained. Being a bit shaken, he started to pray, devoutly. The ghosts stayed on. Suddenly, he had an inspiration; he announced: "We will now take up a collection." Every ghost vanished in a rush!

This is not a ghostly illusion, but an authentic fact. For no one is better fitted to review our quarter century of progress than tonight's Historian; he is the third President of the Association, the first Chairman of the New York Section, and an active member in the Association for these twenty-five years. He is also a member of the Research Committee. It is my pleasure to present to you at this time your Historian, Past-President P. J. Wood, who will give you an "Historical Sketch of the AATCC."

Mr. Wood! [Applause]

. . . Mr. Wood presented a history of the Association. . . .

Historical Sketch of the AATCC*

P. J. WOOD

Past President, AATCC
Technical Director, Royce Chemical Co.

THOSE of you who have been in London must have visited that world renowned church dedicated to the memory of St. Paul. There is no monument of the celebrated architect of this beautiful sacred edifice, but around the dome are carved these words in latin, *"Si monumentum requiris, circumspice"* "if you seek a monument, look about you." And so I say to you, gentlemen, if you seek a monument to the growth of the AATCC in numbers and importance, look about you.

Early Beginnings

As long ago as 1910 and 1911, there appeared to be developing a feeling that an organization of textile chemists was necessary; evidence of this fact is apparent, as the alumni of the Philadelphia Textile School held several meetings to discuss the subject during those years. To quote the history as reported in the Silver Jubilee Issue of the American Dyestuff Reporter, "There was much optimism but no action."

Dr. Louis A. Olney wrote a letter to Dr. Frederic Dannerth, early in 1911, discussing this matter and opposing the idea that had been put forward in some

*NOTE: While a history of the AATCC appeared in the December 2, 1946 issue, Mr. Wood has brought out a number of interesting points that make the publication of his remarks of value to the members.

quarters, that a section of the British Society of Dyers and Colourists be formed in this country. (Probably he didn't like the way the British spell the word "colourist"). He felt that there were enough men connected with the industry in this country to make such a society a success without (I quote my esteemed confrere) attaching themselves as a tag-end to a foreign society.

Discussions continued from this time on. The matter was not allowed to drop entirely even though the advent of war in 1914 halted any steps toward the consummation of the desired objective.

During the war, the idea persisted as we learn that there was a conference in New York, called by Drs. Olney and Dannerth, at which the matter of forming such an association was further discussed.

In those days of world conflict, the textile chemist, who would make up the membership of the proposed association, were engaged in the war, some in the combat forces, some in chemical warfare and others in the less spectacular but very necessary work of turning out the millions of yards of textiles for the use of the armed forces.

After peace was declared and the problems of reconversion solved, the time seemed more propitious to resume the effort to organize the chemists and form the projected association.

Influence of Press

In 1921 the influence of the Press was brought to bear on the matter. An editorial by our good friend and benefactor, A. P. Howes, entitled, "Wanted: A Technical Association of the American Textile Industry," appeared in the June Technical Supplement of the American Dyestuff Reporter. This article drew attention to the need for and the benefits that could be expected to be derived from such an association.

Here is just one short quotation from this editorial which might be considered as prophetic. "The REPORTER believes that the time is ripe for the organization of a technical association of the textile industry, and that the industry would gain immeasurably by the presence of such a body within its ranks."

Mr. Howes was right on both counts. The time *was* ripe for the formation of the Association and the industry *has* derived innumerable benefits from the work of the research committeee organized by the Association and by the stimulation of the individual members in the employ of industry.

Previously, in September 1920 there had appeared an editorial by Professor Olney, Technical Editor of the Reporter, "Standard Dye Tests and Standard Records—A Plea." Whilst this article did not refer to to the plans to establish an association, it did point out the importance of setting up standard methods of testing colors.

A number of like articles of this general tenor appeared under the signature of Professor Olney who was Head of the Department of Chemistry and Dyeing at the Lowell Textile School and also President of the Stirling Mills of Lowell.

Professor Olney had been in charge of the Department of Chemistry and Dyeing for some years, ever since this branch of teaching was inaugurated in Lowell. Therefore, there were in technical positions in the textile industry a great many executives and young men who had graduated from his courses in both the day and evening classes. The graduates from the classes of the evening school had banded themselves together in a small group called the Olney Chemical Alumni, which met periodically, mostly for fellowship, which naturally developed into informal discussions and exchanges of ideas. One specific objective of this alumni association was the awarding of a prize set of books each year to the evening graduate of the Lowell Chemistry and Dyeing Course who maintained the highest scholastic record. All the members of this alumni were interested in the formation of the new organization. With this background, it seems to have followed quite naturally that the plans for the development of such an American Association of Textile Chemists and Colorists should come to a focus in the person of one so well equipped and strategically located in the technical branch of the textile industry.

Preliminary Meetings

So, Dr. Olney, early in August 1921, called together a small group of men at the Engineers' Club, in Boston, to discuss the idea. They arranged to hold a larger conference at the Chemists' Club in New York, September 15.

The list of those present at that meeting appears in the official history of AATCC in the Silver Jubilee Issue of the REPORTER. The meeting was a huge success. It was decided to proceed with the business of organizing the Association and necessary committees were formed.

It is significant that the 26 men appointed on these committees, with the exception of those called to their eternal rest, have continued their interest in the Association through the years to this day. This is, undoubtedly, one of the chief reasons for the healthy growth and solid success of the organization.

Inaugural Meeting

A few weeks later, November 3rd, 1921, the inaugural meeting was held at the Engineers' Club, in Boston, at which 270 charter members were received into the Association. After due discussion of the committee report, the Constitution was altered and adopted, after which the Nominating Committee presented its report and the following officers were unanimously elected:

President: Louis A. Olney.

Vice-Pres.: William D. Livermore and William H. Cady.

Secretary: Walter E. Hadley.

Treasurer: Winthrop C. Durfee.

Councilors:

For 1 year: James J. Amsden and Walter M. Scott.

For 2 years: William K. Robbins and George A. Moran.

For 3 years: Elmer C. Bertolet and Arthur E. Hirst.

(The men on this list who have been spared to us, have faithfully continued their interest throughout the twenty-five years in our history and are with us tonight).

It was at this meeting that E. H. Killheffer presented the kind offer of Mr. A. P. Howes to place at the disposal of the Association space in the American Dyestuff Reporter in which to publish proceedings of the young society.

Formation of Sections

The first Council meeting was held on November 18th, in Boston. At this time the first petition to form a local section was received from Rhode Island. This was quickly followed by Northern New England on December 9th, and New York on January 18th, 1922. Then came the Philadelphia section on June 9th, 1922. It was not until September 26th, 1924 that the Southern Section was formed, largely due to the vision and dogged perseverance of E. H. Killheffer, who so aptly set in motion the forces leading to the formation of the N. Y. Section. To this same gentleman we are indebted for the formation of the Midwest section, and the South Central Section, which was split off from the Southern Section on account of the great area covered by the latter. At a later meeting the name of the original Southern Section was changed to that of Piedmont Section.

The Southeastern Section was the last to be organized on June 20, 1931.

We have heard that there is a movement on foot to set up a section in Texas. Judging by the growth of the textile coloring

industry in California, it would not surprise us to hear that a section was to be formed in that far western State.

It would be interesting to review the accomplishments of the individual sections of the Association and to note their consistent growth and the maintenance of interest on the part of he Sectional members, but it is impossible to cover this phase within the limitation of time allotted. The full history of the parent body is recorded in detail in the Silver Jubilee Issue of the REPORTER and, in the same number will be found a short historical sketch of each section.

Suffice it to say that the thanks of the entire membership is due to a host of men, both in the variours sections and on the Council, which is composed of men from those same sections, who have given unselfishly of their time and substance to insure the successful and smooth operation of their Sections and also of the parent body. The progress made during the first twenty-five years of our history bears witness to this effort, although we are frequently reminded that "the first hundred years are the hardest."

Continued Interest

Those men who answered the call to membership first sent out and who signified their intention of becoming members, in writing, were entered on the list of charter members. They numbered 270, according to the official list.

On reading over this list, it is significant to note that the majority of these men have continued to be actively interested in the Association throughout the twenty-five years of its existence. It is probably even more significant that we find on the roster of the present day membership the sons of many of those original charter members of a quarter of a century ago. To cite a few of these known by this writer, we have

N. Y., Felix L. Bume, son of charter member of Louis F. Bume.

N. N. E., Walter Durfee, son of charter member Winthrop C. Durffee.

Canada, Clarence Fieldhouse, son of charter member William H. Fieldhouse.

R. I., A. Newton Graves, son of charter member E. S. Graves.

N. Y., Hans J. Hunziker, son of charter member August I. Hunziker.

Pied., John Killheffer, son of charter member E. H. Killheffer.

N. N. E., F. L. Harold Sjostrom, son of charter member C. G. V. Sjostrom.

(In browsing through the list of charter members of the Association, it occurred to me to count up the number of what used to be considered the four commonest names in the English language, Smith, Brown, Jones and Robinson. Let us take the liberty of comparing with these, the average name of Wood, for instance. The figures were as follows:

Smith	Brown	Jones	Robinson	Wood
2	2	0	1	2

It was heartening to note that the Woods, a much smaller tribe than those named, equalled the Smiths and the Browns, infinitely outnumbered the Jones' and totalled double of the Robinsons. However, the passage of time has changed these figures, as a glance at the current Year Book reveals the following figures:

Smith	Brown	Jones	Robinson	Wood
41	4	16	5	9

The members of the Wood family, whilst now hopelessly outnumbered by Smiths and having demonstrated their inability to "Keep up with the Jones," can still claim equality with the Browns and Robinsons together.)

From this small beginning in 1921 has grown this gigantic organization we now know, and the world knows, as the AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS. It exemplifies vividly the old adage, "Great oaks from little acorns grow."

Research Committee

Very early in the career of the infant organization, the important Research Committee was formed. The first meeting was held at the Engineers' Club in Boston, on December 9, 1921. It was decided that the president of the Association, then Professor Olney, should be chairman of the Research Committee, which activity he has continued until the present day. The 148 meetings of this committee have all been attended by Dr. Olney, with the exception of two; a remarkable record.

At the second meeting of this committee, held January 13, 1922, the first subcommittee was appointed, since which time a large number of sub-committees have been instituted, from time to time, covering an enormous number of subjects, all of intense interest to the textile industry.

In order to show the diversity of subjects covered by the activities of the Research Committee it may suffice to mention just a few:

Ageing of Textiles under chairmanship of Kenneth H. Barnard.

Wash Fastness Tests under chairmanship of Charles W. Dorn.

Fastness to Light, under chairmanship of Charles A. Seibert.

Chemical Technology of Wool, under chairmanship of Harold W. Leitch.

Resistance to Insect Pests, under chairmanship of A. J. Kellner.

Transference of Color under chairmanship of Daniel P. Knowland.

Mildew Proofing under chairmanship of H. D. Barker.

Mildew Proofing under chairmanship of James R. Redmond.

Water Resistance under chairmanship of Geo. A. Slowinske.

Chemical Analysis Methods under chairmanship of Percival Theel.

Bibliography under chairmanship of Ruby K. Worner.

Detergency under chairmanship of Frederic A. Prisley.

Atmospheric Fading of Acetate Rayon under chairmanship of Herbert G. Scull.

Previous to the time the Research Committee came into existence, there were very few testing methods which could be said to be accepted as standard. Every organization was a law unto itself and chaos prevailed. It was necessary to review the methods existing and this committee applied itself diligently to the task. Then a new standard method had to be evolved. This was tried out in the various laboratories of the members to determine its practicability and its efficiency in providing the required data. Endless trials had to be made to compare the results obtained by laboratory test to ascertain if this really reproduced conditions to which fabric or fiber would be subjected in its later life. Frequently it was found that changes were required to make the results of the laboratory method conform to the findings in practice. A notable example of this is the enormous amount of work already done to devise a test which will show what a dyed color may be expected to do when subjected to a multiplicity of launderings. This work is still continuing. An idea of the magnitude of this problem can be realized when we are told that the number of individual samples treated in a recent laundry test was over 60,000, covering only cotton and rayon piece goods. Similar tests being made on hosiery involve an immense number of tests.

From these figures it can be realized how thoroughly this committee is going into the matter of correlating laboratory tests with practical application in industry.

In the early history of the Association, when this committee lacked the financial support of the textile industry and relied solely on the membership dues, the work was carried on by the members of the laboratories of their several concerns and progress was necessarily slow. Nevertheless the work went on steadily during those early years fostered by the unselfish devotion of many unnamed members

striving toward the ideal of the Association, the establishment of standard test methods. Looking at the results attained during that volunteer period, one must admit that the accomplishment was highly creditable. As a matter of fact it is safe to say that, had it not been for these faithful ones who carried the torch in those lean formative years, the present more adequate support afforded by the textile industry would not have been forthcoming.

Value of Association

Whilst it is true that the establishment of the series of standard test methods has been of inestimable value to the textile industry, and will become more valuable as the years go on and they are more generally adopted and accepted by the industry, it is equally true that there are several intangibles and imponderables not commonly realized and understood by many executives in textile concerns, even those contributing to the financial support of the work of the Association.

These are the benefits to be derived from membership in the Association both by the head of the concern and his chemists. Attendance at the Sectional meetings frequently induces a new train of thought in the attendant, which, it must be admitted, is extremely desirable in people expected to create new ideas in the processing of textiles.

Association with other men, encountered at these meetings, having common interests, cannot but be beneficial. One might argue that it is possible to read the lectures that are delivered at such meetings, when they are published later. This is perfectly true, but the question and answer period which generally follows the reading of the papers is frequently not reported in the published proceedings and this is often just as valuable as the paper itself, sometimes even more so.

Another feature which has been introduced in some sectional meetings is the practice of holding sessions at which members may bring up some of the problems which may have been puzzling them in their daily work for discussion by those present. This type of meeting can be made very helpful, particularly to the younger members of the organization. This fulfils, in a very realistic way, the first and third objects of the Association which read,

1. "To promote increase of knowledge of the application of dyes and chemicals in the Textile Industry."

3. "To establish for the members channels by which the interchange of professional knowledge among them may be increased."

Annual Meetings

To return to the history of the Association, as a whole, whilst the inaugural meeting held in Boston November 3, 1921 was the foundation stone, so to speak, of the edifice, it could hardly be called an annual meeting. Nevertheless, what might properly be called the first annual meeting, but is referred to in the records as the second annual meeting, was held on December 2, 1922. The honor of sponsoring this meeting fell to the New York Section. At this meeting the first financial report was rendered by the Treasurer, Winthrop C. Durfee showing $1,185.00 received from dues, which at $5 apiece indicates that 237 members had paid their dues during the year. (This seems to point to the fact that some of those 270 charter members, previously mentioned, must have been somewhat tardy.) After payment of all bills, the Treasurer further reports a balance of $514.52 on hand. Financially the Association was a success.

It was originally planned to have an afternoon section and a dinner in the evening, at this second Annual Meeting, but the interest was so great that it was extended to two days.

At the third annual meeting, in Providence, in 1923, the membership roll had already grown to 600 in the short space of two years. A year later, at the Annual Meeting, in Philadelphia, Dr. Olney reported a membership of 800. By now, it was abundantly evident that the "Founding Fathers" had made no mistake.

With the exception of a short period during the recent war, when our Government found it necessary to restrict travel, these Annual Meetings have been held, the various Sections acting as hosts. Each year it is becoming more and more difficult to find accommodations for the huge crowds that attended these important affairs.

A feature which has greatly added interest to these Conventions is the Intersectional Contest suggested by Henry F. Herrmann, our new president, and inaugurated in 1940. The competition in this annual event has been keen and the various sections have brought to it a great many valuable papers, some of which have led to formation of special Research Sub-Committees to continue the work to which they have pointed the way.

Year Book

At the end of the first year of the career of the young Society, the Council discussed the idea of publishing the Year Book, with the object of issuing, in compact form, the results of the work of the Research Committee and particularly to publicize the established Standard Test Methods, both tentative and approved. This formed a very handy laboratory hand-book, not only for the membership, but for all technicians in the industry. Later, a list of analytical procedures was added, which covered the chemicals more commonly used in textile processing. This has evolved into a veritable text book on textile chemistry in condensed form. On visiting the various textile laboratories throughout the country, one is struck with the constant use apparently being made of this book. Members are entitled to receive a copy of the Year Book as issued each year and the number of people, both here and in foreign countries, who purchase copies year after year, bears testimony to the high esteem in which it is held.

Cooperation with Foreign Societies

Another important step was taken by the Association in 1927, when E. H. Kilheffer was appointed to represent the Research Committee to confer with the British, French and German committees in an effort to enlist their cooperation in establishing international Standard Fastness Tests. The results of his labors in this direction resulted in a considerable measure of progress which continued until interrupted by the advent of war. It is hoped that these relations may soon be resumed.

Quite recently, within the year, the British Society of Dyers & Colourists decided to revise the Colour Index, originally published by them some twenty years ago. They requested the cooperation of this Association in making this revision and in jointly publishing the Index. A committee was appointed to take charge of the matter and it was decided to enter into partnership with our friends across the water in this project. They appointed a co-ordinator for their part of the work and our committee appointed a man eminently qualified to undertake this task, our former National President, William H. Cady, under whose capable direction this important work is now proceeding.

Membership Reaches 1,000

At the seventh annual meeting held in New York in December, 1927, Professor Olney retired as President of the Association having served six years in that capacity. The membership now totalled 1,000. At this meeting Professor Olney said amongst other things, "I am con-

vinced that its constant growth has demonstrated, without any doubt, the desirability and value of such an organization; and, furthermore, I am inclined to believe that an Association of the character of ours will be of even greater value during the years to come. The most important work before the Research Committee is the continuation of the study of standard methods of dye testing."

Dr. Killheffer, who was elected to succeed Dr. Olney as President, at that same meeting, remarked that the ultimate value of the work of the Research Committee could not possibly be known at that time, inasmuch as what they had done up to the present had been more or less in the way of laying a foundation for a permanent structure.

It was at this meeting that it was voted to amend the Constitution to provide for the admission of those lacking qualifications for active membership under the classification of "Associate Members." This move permitted many people interested in the objects of the Association to join our ranks. They have made a definite contribution to the success of the organization.

Incorporation

On February 6, 1929 the Association was incorporated under the laws of Massachusetts, all the then officers of the Association being elected officers of the Corporation.

Past Presidents

It is the custom of the Association to elect Past Presidents to Life Membership of the Council. Eight Past Presidents have been so honored:

Louis A. Olney, Elvin H. Killheffer, P. J. Wood, Robert E. Rose, William H. Cady, Alban Eavenson, Carl Z. Draves, Thomas R. Smith.

These men were all presented with the handsome Past Presidents' emblem on completion of their term of office and they are all active members of the Council, with the exception of Robert E. Rose, who entered into eternal rest this year. His scholarly and genial presence will be greatly missed by the entire membership.

Interest in Other Associations

The American Association of Textile Chemists and Colorists has taken a keen interest in associations having similar aims to its own. In fact it may claim with right that it was the prime mover in the formation of the Institute of Textile Research, an out-growth of the Textile Research Council, the larger part of which was constituted by members of our AATCC. This cooperation was genuine and substantial, as we find that our Association voted a contribution of $1,000 for the permanent fund of the U. S. Institute for Textile Research. This organization was later reorganized as The Textile Research Institute in the membership of which our members have strong representation, our retiring president, Wm. D. Appel occupying the important office of Chairman of Research.

A fruitful source of new members has resulted from the creation of junior sections in the Textile Colleges in various parts of the country. The first of these was the chapter formed at Lowell Textile Institute, which held its first meeting March 22, 1923. This was followed by one after another of the other colleges.

In 1930, Walter M. Scott, Chairman, Carl Z. Draves and Wm. D. Appel were appointed a committee to look into the advisability of organizing an Inter-Society Committee on Color Specifications. At the preliminary conference which these men attended, it was voted to form an Inter-Society Color Council to consist of delegates representing national associations interested in the description, specification and standardization of Color. This Society was eventually organized and the delegates are the members of the aforementioned committee and they have represented our Association ever since.

Defense Program

On June 21, 1920, the secretary, Harold C. Chapin, John N. Dalton and Roland E. Derby were appointed a committee to offer the services of the Association to the Federal Government and its agencies in the defense program. These services were eventually offered to the Advisory Committee to the Council of National Defense and subsequently acknowledged by Robert Stevens, Vannevar Bush and the Commanding Officer of the Quartermaster Department who were members of the National Defense Advisory Commission.

Olney Medal

In June, 1943 a letter was received from the Howes Publishing Company offering to endow the annual award of a medal to be known as the Olney medal. Carl Z. Draves conferred with A. P. Howes on the matter and these men drew up the conditions under which the award is to be made. The first award was to Dr. Olney himself and the medal was presented by Mr. Howes in person, at the Annual Meeting in Atlantic City, October 14, 1944. The only other award of this medal to date was to Milton Harris at the Annual Meeting in New York on January 5, 1946. (The third award was made to William H. Cady at the Silver Jubilee Convention.—Ed.)

Executive Committee on Research

At the Council meeting of October 22, 1943 a committee consisting of Leonard S. Little, Chairman; Wm. D. Appel, Thomas R. Smith, P. J. Wood and Robert Bonnar, secretary, was appointed to determine the future policy of the Association regardiang research. The chairman of the Research Committee was an ex-officio member also.

This committee made several important recommendations as follows:

1. That the Research committee continue to maintain the position of the Association as the authority on textile testing methods.
2. That the laboratory staff at Lowell be increased.
3. That a full time director of research be appointed when available.
4. Appointment of an Executive Committee on Research.
5. That chairmen of sub-committees be limited to 3 consecutive years of office.

This report was accepted and the reporting committee was elected the initial Executive Committee on Research. They went into action at once and have met every month since. One of the most important actions of this Executive group was the appointment of Harold W. Stiegler as full-time Director of Research on Dec. 1, 1945. Dr. Stiegler has had a well-rounded experience both in the scientific and practical field and has all the necessary qualifications to carry on successfully the work of the Research Committee. His work consists not only in direction of the laboratory at Lowell, but supervision of all activities undertaken by the Committee, wherever they may be conducted.

The judgment of the Executive Committee on Research in recommending the creation of this office and their choice of this particular appointee appear to be fully justified according to the results observed.

Accomplishments

In a short dissertation of this sort, it is impossible to releate in detail all the accomplishments of the Association in the past 25 years. Enough has been told, however, to indicate that the life of our organization has been fruitful. The test

methods that we have striven to establish are coming into more and more general use in the textile mills. They have been revised time and time again to make them represent more accurately the actual properties of fastness of the products being tested. This work continues and will continue.

The educational value of the meetings both sectional and annual connot be estimated. One yard stick that we can apply is that of attendance at these meetings, which indicates a high degree of interest. The fact that our membership has grown from a mere handful of men in 1921 to a membership of nearly 5,000 means only one thing, that the Association is fulfilling a useful function, in the opinion of that membership.

Then again, as to the service rendered to industry. Henry F. Herrmann has wisely asked the question, "If the test methods and standards and knowledge gained through this work disappeared over night, how long would it take individual mills, or groups of mills, to re-establish these methods and standards for the regulation of their operations as an industry and what would be the cost?"

Think it over.

The history of the Association has been enriched by the devotion of its members and the vision and leadership of its guiding body, the Council. Having attended the majority of the meetings of the Council, I can truthfully report that participation in the deliberations of that body by the Officers and Councilors is far from perfunctory. Your elected representatives have given their best thought to the business and problems of your association, at all times.

Let me close this talk with a quotation from a recent commencement address made by our fellow member, Professor E. R. Schwarz:

"The chemist has made lasting and unquestionably great contributions to textile research and manufacture. He must be joined by the physicist and the engineer, for no longer can a dividing line be drawn between these fields. Both must join with other scientists, economists, and with the active management of the textile industry to do several important things. They must first interpret the findings of scientific research, both old and new to industry, so that it may be put to use. They must seek additional information in the light of modern science and by means of its latest techniques and equipment."

"You who have been trained in the fundamentals of textile technology in its various forms, and who have, in addition, a growing appreciation of the scientific methods of research, can be of very real service to your chosen profession. You can set higher standards for it. You can aid in the work of research which must be done in the years ahead. You can help immeasurably in making the results of research understandable to management. The need is great. The field is wide. The reward is incalculable to you and to the industry you serve."

Somebody has said that any successful organization is but the lengthened shadow of a man. In the case of the American Association of Textile Chemists and Colorists, that man is Louis Atwell Olney, whose abounding energy, unfailing patience, consistent courtesy and talent for leadership have endeared him to the membership and earned for him their respect and hearty cooperation, to the extent that, in 1930, at the Convention held in Chattanooga, a resolution was unanimously passed designating him President Emeritus of the Association and a life member of the Council.

Long may he live to enjoy this life-membership.

* * * *

Toastmaster Theel: The next speaker is one of the oldest alumni of the Lowell Textile Institute, and still active in the field. No one exceeds his record of years of service and efficiency in the dyestuff business. Because of this record—having no Scotch ancestry—he has been chosen to present to the Lowell Textile Institute the portrait that will always be a symbol and an inspiration to that institution. The gentleman who will receive this or accept this gift is one of the youngest Presidents of any textile school, a graduate of M.I.T., a man who is keenly alert to the times.

I now present the gentleman who will present the gift, Mr. Alan A. Claflin! [Applause]

Presentation of Olney Portrait

Alan A. Claflin: Mr. President, Mr. Toastmaster and Members and Guests attending this dinner. On this auspicious occasion, I suppose I should call it an auspicious occasion, for any Twenty-fifth Anniversary can be designated thusly, I appreciate your Toastmaster honoring me by calling me one of the oldest alumni of the Lowell Textile Institute, but I assure you I am far older than that. I remember when that institution was founded, quite well, and meeting Professor Olney then for the first time. But, on this occasion, I have a dual function to perform. One is to congratulate the officers, past and present, for the glorious success in this organization which, by its increasing membership, increasing financial prosperity, needs no encomium, and then to present this portrait of Professor Olney, and in doing so, I would like to say a few words about the origin of it. It had its beginning at a meeting of the Association in Pinehurst. At that time, I had the privilege of being the house guest of the late Leonard Tufts, the founder and creator of Pinehurst, and a classmate of mine at M.I.T. I hadn't seen him in fifty years. So we had many things to talk over. One of the things we found we had a kindred interest in was the fine arts, and I learned that Mrs. Tufts had studied painting both in this country and at the Julian Academy in Paris, where my daughter had studied sculpture. He told me that he usually tried to have a painter in residence in Pinehurst.

As we were discussing painters and painting, and also our coming fiftieth anniversary of our graduation from M.I.T., we thought of a painting of a portrait of Dean Prescott, our classmate and class secretary, that was to be painted and presented to the Institute. Mr. Tufts told me he had a particularly good portrait painter in Pinehurst, Mr. Bingham Ballou. So I got acquainted with Mr. Ballou, and we made arrangements to have Dean Prescott sit for his picture. And I want to say that the painting of a portrait is considerably more of an undertaking than the taking of a photograph. Indeed, if you look at the portraits by Rembrandt, Sargent and others, you don't think so much of the subject as you do of the portrait. And I think that in portraits of the smug New Englanders by Stuart and Copley, you feel that the expression of the artist's appreciation of them is there.

Well, the result of the association with Bingham Ballou was the portrait of Dean Prescott, which now hangs in the Reception Room of the President of M.I.T. It has been much admired there. And, we who had seen the portrait grow couldn't help but think what a splendid subject Professor Olney would be for a portrait. You know, there is an old proverb about rabbit pie, and the first requirement is to catch your rabbit, to bring it up-to-date. In any recipe for dessert, first get your sugar. So when we approached Professor Olney on the subject of a portrait, we found we had a problem, and we had to engage the assistance of the alumni of the Textile Institute, and I mean the real alumni, not the pseudo ones, and we had to appoint a committee for this. Azel Mack and Edward Bell assisted in persuading Professor Olney; the alumni, Mr. Moorhouse and Harold Leitch were particularly encouraging in giving their assistance. But, it was a real job, and it was the distant alumni that turned the scales. You know,

A photograph of the Louis A. Olney portrait. The artist was H. Bingham Ballou Jr.

it isn't easy to persuade a modest and an active man to relax sufficiently to sit and get acquainted with an artist. In fact, the artist has said that Mr. Olney's portrait is a sort of a marathon affair. I think it was somewhat over a year in preparation. He said it would take twenty-five or thirty sittings, preferably thirty-five. But, we progressed, and I think the Professor got a little more interested in the project as it went along.

I couldn't help but think of that quotation your historian gave you, for that is the faith of many New Englanders.

Now, I wish to say something about the lengthening shadows. Some critic said that shadow had a wrong interpretation on it. You know, in the old days, we used to appreciate the lengthening shadows, when we walked along the street. Now, the automobiles are there, and so you don't see shadows; you only see the approaching headlights.

So with the assistance of the distant alumni, as I said, that turned the scales. I don't know what it is about an alumni group or a former student of a Professor—the fondness for the alma mater or for the professor—but it seems to increase with the distance from which they or he is located from the institution, and I wish to thank, particularly, Arthur Thompson of the Piedmont Section and Arthur Brainerd of the Chicago Section, for their cooperation, in persuading Professor Olney to sit for his Portrait.

Surely, you are bored with my description of the genesis of this portrait. You would like to see it and hear what President Fox will say about the attitude of the Trustees of the Lowell Institute, in receiving this portrait, and letting it hang in Southwick Hall, as a permanent and living memorial of Professor Olney and what he stands for and what he has done for the school.

This is the portrait!

[The portrait of Professor Olney was then unveiled on the stage of the Ballroom of the Hotel Statler, in view of the audience present, who applauded with enthusiasm.]

Acceptance of Portrait

Kenneth Fox: As President of Lowell Textile Institute, it is a real pleasure and a very distinct privilege to accept this portrait on behalf of the Board of Trustees.

I have always felt very humble in the presence of our beloved Dr. Olney, and I must admit that I feel even more humble than ever.

Since assuming the office of President a year and a half ago, I have had occasion to experience many very pleasant tasks. But I must say that this present opportunity for accepting this portrait on behalf of the Trustees heads the list.

I do not want to take the time of the meeting to comment on the contributions of Dr. Olney to the AATCC. I would, however, like to say just a few things about the contributions of Dr. Olney to the Institute at Lowell. I have been reading some of the back journals, containing some of the papers written by and about Dr. Olney. I cannot profess to be one of the oldest graduates at the Institute at Lowell; therefore, some of his accomplishments took place before I saw the light of day. But, I read that Dr. Olney was graduated in 1895, I believe, or in 1896, and then spent a year teaching chemistry and developed a course in Textile Chemistry at Brown.

He was then prevailed upon by certain of the authorities who had dreamed about an institute at Lowell, to come to Lowell and take over this magnificent laboratory for textile chemistry. Well, he arrived in Lowell, and the story, as I can best fit it together, indicates that he was ushered into a building, shown a loft (which I think accurately describes what is over the Bliss Station, which may be indicative of textile chemists and where they belong). He saw an open room. I mean just that. Yes, there was a hole in the floor, and a corresponding hole in the ceiling. He was told to ready himself for a class of twenty students. So he feverishly scouted around Lowell and fixed up certain equipment for the organization of the laboratory. He felt that twenty was too small a number, so he held out for, I believe, forty or forty-eight students, and on registration day, I believe sixty showed up.

That very humble beginning represents the first stage in the development of the Department of Textile Chemistry and Coloring at the Lowell Textile Institute.

In the presence of one of my colleagues at the Philadelphia Textile Institute, I will make no claims about the Department at Lowell. I think, however, it is well-known by this group particularly, and well recognized, as being an outstanding Department in Textile Chemistry. For that development, Dr. Louis A. Olney must take full credit.

However, as you know, you can have the most ideal educational department, with all the modern frills and chrome; but, the success of any venture in the final analysis is the type of product turned out.

I took occasion this week to glance through the catalogs and find out just

where the chemists were placed at the moment, and what their positions amounted to. I do not intend to recall any specific names at this time. Those of you who do have literature, however, on the Institute, can look for yourselves, and I am sure you will agree with me that his efforts have not been in vain.

Physical evidence, also, of the contribution can be seen in the Louis Pasteur Hall, which now houses the Chemistry Department at the Institute.

However, every man is entitled to at least one grave mistake in his career. Dr. Olney is no exception. In the early 1930's, he had a student by the name of Fox; one of three, in fact, and I was exposed (and I use that term advisedly) to certain of his subjects, one of which was Organic Chemistry. I passed the subject. There is the grave mistake. I still cannot tell methane from benzine, unless I see the ring. Perhaps the only justification for his passing me in the first place was that I had certain radical views, and this massive pulp above my neck can be compared to a fatty compound!

You know, it is interesting to hear the individuals in and around the Institutes throughout the country say: "Oh, yes, Dr. Olney has retired."

At the risk of offending some of my staff at Lowell, I should like to say that I wish all the staff at Lowell were as active in non-retirement as he is in retirement! For in addition to his AATCC accomplishments, he delves in the banking and publishing business, and I will be very honest and admit that he still is an excellent educator and I lean very heavily on him for suggestions and assistance in operating the Institute at Lowell.

I thought you might like to hear just a word about the type of bed-fellows he is going to have in Southwick Hall at Lowell Institute. We do have a number of portraits hanging on the walls at the Institute. I shall only mention three in passing, simply to indicate the type of personnel that will surround the portrait. I must admit that all of these men are complete strangers to me, physically; and yet, I feel acquainted with them in terms of their accomplishments at the Institute. One of the portraits we have is of Alexander G. Comstock. Some of you may recall that he was the President of the first Board of Trustees of the Institute, and was extremely instrumental in organizing it. Then, there is Royal Southwick, a man keenly interested in education, a manufacturer, and after whom our administrative building is named, Southwick Hall. The third gentleman I want to mention is James T. Smith. My predecessor, Mr. Eames, used to talk with me at great length about Mr. Smith; I certainly wish that I was alive in his time. He was frequently called by Mr. Eames and other people, too, the father of the Lowell Textile Institute. His suggestions and his guiding hand were fundamental, certainly, in the early stages of the formulation of the Institute.

I am sure that the addition of the portrait of Dr. Olney is entirely consistent with the background and abilities of the gentlemen who now grace the walls of Southwick Hall.

In closing, I want to compliment Mr. Claflin and his group and the AATCC on the judgment which they have displayed in selecting Dr. Louis A. Olney as the subject for this portrait. We shall hang it on the walls of Southwick Hall and be proud of its presence.

I am particularly glad that Dr. Olney is still with us so that he may, himself, see it grace the walls of our Institute at Lowell.

Thank you very much! [Applause]

Toastmaster Theel: Thank you very much, President Fox. No words of mine could serve to introduce our next speaker. He stands alone in his pre-eminent accomplishments with reference to the Association and the Lowell Textile Institute.

I present to you the one and only Dr. Louis A. Olney!

[The audience rose and there was prolonged applause.]

Olney Medal Award

Address on the Medalist

Dr. Louis A. Olney: Mr. Chairman, Fellow Members of the Association and invited guests, it is not only a great pleasure, but I deem it a privilege to participate in this part of the program.

Some with whom we are associated we come to respect to a very high degree. Others with whom we are in contact we not only grow to respect, but there gradually develops an affection for them which increases as time goes on. That is the feeling I have toward the recipient of the AATCC medal this evening, and I am sure that this is the feeling of our whole Association. He is a Charter member, and for 25 years one of our most valuable workers. Always willing and ready to help on any and every occasion, not one of those who may be active today but gone tomorrow, but one who has maintained an even tempo for the quarter of a century of our existence as an Association.

He was one of those invited to attend the small group of textile chemists that gathered at the Engineers Club in Boston, Aug. 21, 1921, to consider the possibilities of forming an Association for Textile Chemists and Colorists. His early interest in the association was exemplified by the fact that it was he who called a meeting to organize the Rhode Island Section and in such haste that their petition signed by 26 members was presented at the first Council meeting November 18th, two weeks after the formation of the Association. He therefore has the honor of forming the first section of the Association.

William Hamlin Cady the recipient of this year's medal was born in Providence, R. I., July 8, 1877. He graduated from Mowry and Goff's School in 1894, entered Brown University that same year, and received an A.B. degree from that institute in 1898 and an A.M. degree in 1905. From 1899 to 1904 he was chemist and demonstrator for the Farbenfabriken of Elberfeld Co. and from 1905 to 1917 he continued to serve in a similar capacity, first with the Farbenfabriken and later with the Badische Co. From 1918 to 1922 he was Chief Chemist for the U. S. Finishing Co. and from 1922 to 1929 Research Chemist for the Pacific Mills. From 1929 to 1931 was Chief Chemist of the Slater Co. in Webster; from 1931 to 1946 again Chief Chemist of the U. S. Finishing Co. resigning in March to undertake the work on the Colour Index, but remaining with the company as a part time consultant.

The Colour Index Committee was particularly fortunate in securing Mr. Cady as coordinator for the new edition of the Colour Index, which is to be published jointly by the British Society of Dyers and Colourists and the American Association of Textile Chemists and Colorists. He is particularly fitted for this work for his knowledge of dyes as regards constitution, general properties and application, is quite remarkable.

Mr. Cady has always been such a conscientious, painstaking, and energetic worker that he had but little time for hobbies. Like some of the rest of us he has been interested in philately, which he has described as being more of a habit with him than a hobby. His real outside interests have been gardening in season, listening to fine music, and playing tennis. Regarding the latter, it is only a short time

ago I endeavored to impress him with the thought that it might be unwise for him to continue with such an energetic sport, but apparently my effort was not at all impressive, for I only drew the comment, "I had rather drop dead playing tennis than to pass out in any other way." Home interests have always been foremost in his life, and what is rather unusual for one of his age; he still lives in the house in which he was born.

He has referred on different occasions to two other activities as his "extra curricular" as the colleges would say, but I would describe both of them as plain hard work. One is correcting proof for the AATCC, a job which he has done almost continuously since the Association was organized, particularly with the Year Book, and we owe him a debt of gratitude, for his painstaking work in connection with our dyestuff lists.

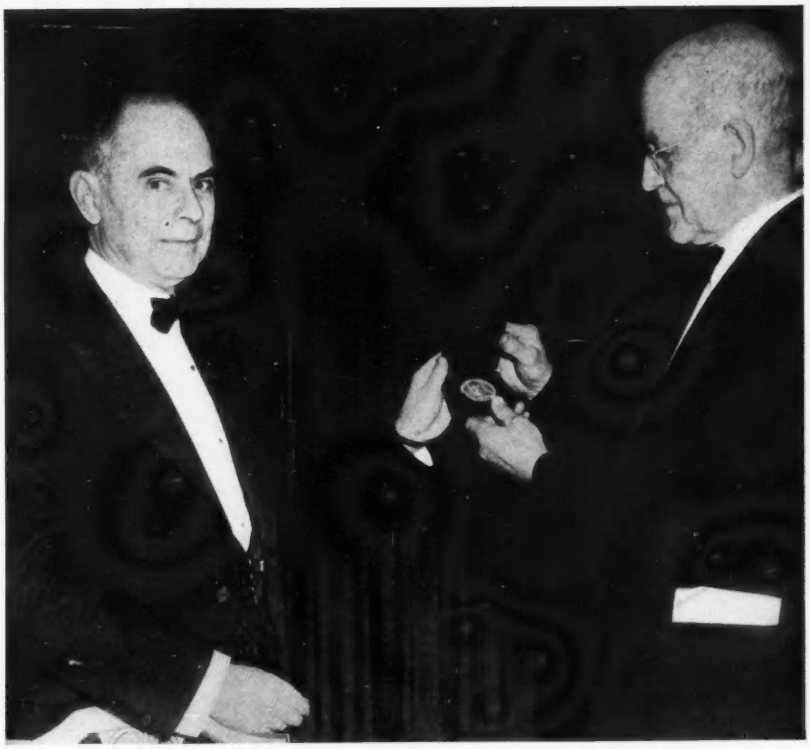
The other activity eventually involved a dire tragedy. About 1920 he started to build a technical card index. He worked on this during much of his spare time, if such it could be called, until by 1938 he had a very complete card index of many thousands of items. Then the hurricane and accompanying flood came, and completely destroyed his entire work of nearly 20 years. With most men this would have been the end but not so with him. He started all over again and has built a new index which already has more than 20,000 items.

Mr. Cady has contributed many articles and reports for publication in our Proceedings. His work in connection with Light Fastness is foremost and extends over many years, also his work in connection with Printing Pastes, but they are only two of the many ways in which his scientific mind has been active. I have before me a list of seventeen reports and papers which he has published. I will not read the titles but will merely say that they deal chiefly with

Fastness of Dyes to Light
Printing Pastes
Processing of Rayon Fabrics
Gas Fading of Fabrics Dyed with Acetate Rayon
Mercerization and Tenderizing Action of Sunlight on Textile Fabrics

He has proven himself to be a scientist in the full sense of the word and the precision and patience which he has displayed in his research work have been notable.

I know of no one who has worked longer hours and over a longer period in the interest of the Association and I found upon going over the records that he has at various times served on fourteen different committees and has been Chairman of at least six.



A. P. Howes, President of the Howes Publishing Company, donors of the Olney Medal, as he presented it to William H. Cady, this year's recipient of the Medal.

The AATCC medal as we all know has been made possible by our good friend Alfred P. Howes, of the Howes Publishing Co. We are all glad that he is with us and he will present the medal.

Presentation of Medal

A. P. Howes: Mr. Cady, I can't tell you how delighted I was when I heard you had been selected for this year's award. I don't know of anybody who more richly deserves it. I doubt if anybody will more richly deserve it.

I should like to read the citation on the medal, to accompany the award of the Third Olney Medal.

"To William H. Cady, December 12, 1946, accomplished textile chemist, master colorist, life-long student and beloved friend, for valuable contributions to textile chemistry and dyeing, and exceptionally meritorious services in the advancement of the textile chemical industry. William H. Cady has conducted important and productive researches for the benefit of the industry on color-fastness and methods for evaluation on Textile Printing and on the Tendering of Textiles by Light. He has guided the Research of others in these fields. He has labored conscientiously, self-lessly and effectively year after year to raise the quality of the publications of the AATCC and to strengthen his services to textile chemistry. His wealth of knowledge and experience have been given freely to all, and his keen criticisms and constructive counsel have been an invaluable guide. No one has been more sincere, devoted and dependable in the accomplishment of the many often onerous tasks that have arisen.

"The Olney Medal of the AATCC is given in grateful recognition of the faithful services, high ideals and substantial accomplishments of William H. Cady."

This is signed by the Olney Medal Committee of Award, William D. Appel, Kenneth Barnard, Walter M. Scott, Harvey A. Neville and Charles A. Seibert.

[The medal was then presented to Mr. Cady by Mr. Howes. The audience rose and there was much applause.]

Address of the Medalist

William H. Cady: Mr. Toastmaster, Mr. President, Mr. Howes, Dr. Olney, Ladies and Gentlemen.

It is difficult to find suitable words to express my appreciation of this honor,

The Olney Medal

which I never expected would come to me. It is particularly gratifying to know that I was nominated by Dr. Olney himself, with whom I have been so closely associated all these years, and whose friendship I value most highly. For twenty-five years, Dr. Olney has been the human dynamo from which the current has flowed to make the machinery of this organization run. It was from him that those who served on the original Research Committee obtained the inspiration, the incentive and the active support which enabled them to accomplish what they did. He and I have not always agreed (you can hardly expect a Rhode Islander to agree with anybody else), but we have much in common. We don't drink. We don't smoke. And we both collect postage stamps.

May I at this time express my sincere thanks to the donor of this beautiful medal, Mr. Howes, Number One Benefactor of this Association, whose unfailing support ever since the earliest days has been an important factor in our progress, as you well know.

I should like to pay tribute, also, to just a few of the other men on the Research Committee with whom I worked in those early years. Standing out in my mind are, first, Walter Scott, one of the stalwarts of the original Light Committee, author of the standard tests for silk, and compiler of the "Analytical Methods for a Textile Laboratory," one of our most valuable publications; next, Hugh Christison, whose interest in the fading of dyes has never flagged, who pioneered in the construction of the Launder-Ometer, and who knows more about perspiration than any man alive; next, our esteemed President, whose contributions to the technique of light testing are outstanding, and who also had a hand in designing the Launder-Ometer; next, the late George Moran, who laid the foundations for our standard wash tests on cotton, now written into every government specification and generally accepted in this country and occasionally abroad—I have even seen them referred to in a British Patent Specification, which is quite extraordinary. One more stalwart must be mentioned, who has probably put in more actual hours of work on Association problems than any other member, with the possible exception of our President Emeritus. I refer to Charles Seibert, whose activities have covered such diverse subjects as fastness to chlorine, light, dry cleaning and gas fading, and who, but for the restrictions in our By-Laws, would probably be the permanent chairman of most of our sub-committees.

I wish I had time to go through the whole list. This Association was indeed fortunate in enlisting in its ranks such an able group of workers, when it was just getting started.

As an alumnus of the dyestuff industry—I served an apprenticeship of seventeen years in dye labs before becoming a mill chemist—I would like at this time to express my appreciation of the invaluable services which have been rendered by the various dyestuff companies during all these years. Dr. Killheffer, Dr. Meyer, Dr. Rose—these names stand out in my mind as some of the best friends this Association has ever had. Many others could be mentioned. The willingness of large numbers of technically trained men in the dye industry to undertake work for the AATCC in their respective laboratories, at a time when we had no laboratory of our own, undoubtedly saved this Association a very large amount of money, and enabled us to get results which would otherwise have been quite impossible. I should add, of course, that many of the mill laboratories have been equally cooperative.

About ten years ago, speaking at a meeting of the Piedmont Section, in a somewhat pessimistic mood, I attempted to evaluate the progress of this Association up to that time, and posed a number of questions, such as these:

Are we growing in influence in the Textile Industry?

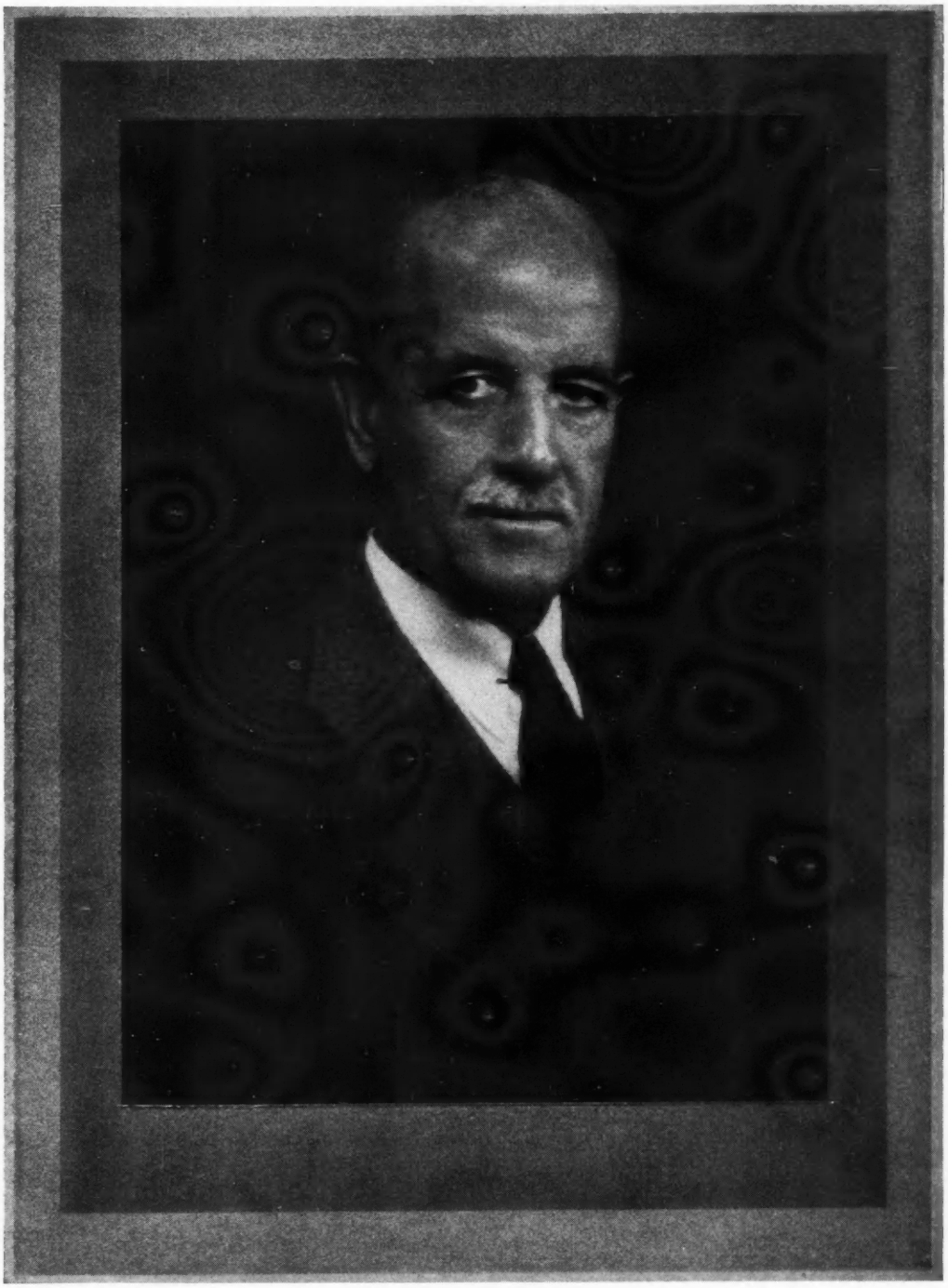
Have we the respect and confidence of the mill men?

Are our test methods generally accepted and adopted as standards?

How do we stand with other organizations similar to ours in other countries?

Within the last few years, I think we have had the answers to most of these questions. For example, the International Salt Company came to us with a request that we undertake a research for them on the comparative values of sodium chloride and sodium sulfate in dye baths. The Quartermaster Department requested us to investigate ways and means for improving the color fastness of O. D. fabrics for the Army. The American Viscose Company established a research scholarship for the AATCC at Lowell Textile Institute. The Society of Dyers and Colourists in England invited us to collaborate with them in the publication of a Second Edition of the Colour Index; and more recently, three members of our Flameproofness Committee, Dr. Hager, Dr. Bonnet and Charlie Dorn, have been hopping back and forth between New York, Washington and the Pacific Coast, teaching National and State Legislators and others the fine points of flammability tests. It would appear that this Association of ours is really acquiring some kind of a reputation.

So far, so good. As for the future, there is plenty of work ahead of us. No doubt, we will hear a lot about this, particularly the activities of the laboratories in Lowell, at the meeting of the Research Committee on Saturday. I will simply mention here that most of our sub-committees seem to be still active. The Light Committee appears to have a little difficulty with the Fade-Ometer not giving entirely uniform fading. There's a good problem which is still a problem after twenty-five years. The Committees on Methods of Analysis have their hands full keeping up with the new finishes and fibers which are appearing every few days. We may soon have to set up standards



WILLIAM H. CADY, A.M.
Third Olney Medalist
Awarded Dec. 12, 1946

of fastness for dyed nylon, Vinyon, Ardil, Aralac, and other fibers just around the corner. How about international standards, which we used to talk about years ago, but never got very far? Now that this Association and the Society of Dyers and Colourists are joining forces in writing a new Colour Index, this would seem to be a good time to adopt a common code of fastness tests for the two countries. Eventually, we might bring in the other countries.

As the work of the Research Committee expands, the need for more workers grows, too. I urge every member who is able and willing to work on any of our sub-committees to volunteer for service. They will find that in the long run, the experience they gain and the friendships they make will more than compensate them for the time and effort expended. And there is a real satisfaction that comes to a man after he has done an important job and realizes that he has done it well.

This Association, as you know, is growing like a snowball, and is getting to be like a boy who has outgrown his clothes. It has already almost passed the 5,000 mark, and if the atomic bombs can be kept in storage a while longer, it may eventually reach 10,000. Soon, if not already, we will be needing a full-time Secretary and other changes. Our Council used to have a quorum of five, and had hard work at times rounding up even that number. Now, we have a total of at least 35 Councilors, and the two largest Sections have so many that if they continue their present rate of growth, they will soon be able to outvote all the rest of the Council. This is not a healthy condition and will probably be remedied soon. Our Year Book is also becoming too large, and must be subdivided. We have already taken out the Analytical Methods. Maybe we should also remove the Dye List and the Textile Chemical Specialties and publish them separately.

Our Sectional meetings are well conducted, for the most part, but there is a little tendency to over-emphasize the importance of a substantial dinner with a pretreatment of ethanol as a necessary adjunct to a successful meeting. As you know, when the lower animals have eaten a hearty meal, they usually curl up and go to sleep. Perhaps this will explain why some of our higher animals have been known to doze off at these after-dinner meetings—indeed, I have done it myself. Maybe we should have the meeting first, and the dinner afterwards; then we could all go to sleep. But, joking aside, our Sections are really their substantial contributions in the shape doing an excellent job. In addition to of technical papers, they are our best recruiting stations for new members, both individual and corporate.

Our Annual Meetings are getting to be a problem, with only a few textile centers outside of New York and Philadelphia able to take care of the large attendance. I think we try to do too much at these meetings. Perhaps we will have to split up the program. For example, have the Intersectional Contest at some other time. Incidentally, I consider that contest one of the most outstanding activities of this Association. It is interesting to note that the idea was originally conceived by our President-Elect, Henry Herrmann. The papers this year are of unusual merit and represent a lot of hard, systematic work by a large number of persons. This idea of group research is an excellent one and to be encouraged. The Executive Committee on Research has more than once urged the Sections to set up local research committees, to work on special projects. I think this is a fine suggestion.

After all, we must never forget the first two Objects of the AATCC, as stated in our Constitution:

"To promote increase of knowledge of the application of dyes and chemicals in the Textile Industry," and

"To encourage in any practical way research work on chemical processes and materials of importance to the Textile Industry."

These have always been our aims. I hope that they will continue so in the future. [Applause]

Toastmaster Theel: And this brings our dinner meeting to a close, Ladies and Gentlemen. Thank you for being with us.

[Whereupon, the dinner meeting was adjourned at 11:05 o'clock p.m.]

WOOL STANDARDS
for
FASTNESS TO WASHING

•

A few of these standards, formerly out of stock, have become available at $1.00, through the Secretary of the Association.

Mid-West Section Formulates Plans and Committees for Convention

THE Mid-West Section held a meeting on January 20th at the Lake Shore Club, Chicago, for the purpose of formulating plans and appointing committees for the National Convention to be held in Chicago on October 23, 24 and 25 at the Congress Hotel.

—♦ ♦—

January Meeting, Rhode Island Section

THE January meeting of the Rhode Island Section was held in the Providence Engineering Society Hall, Friday, Jan. 24th, with approximately 150 present.

Following a short business meeting two papers were presented: one by Alden D. Nute of the American Cyanamid Co. entitled "The Replacement of Starch in the Treatment of Textile Fibres and Fabrics." This was the intersectional contest paper which won third prize at Boston. The other paper was presented by C. H. A. Schmitt, the title of which was "Metachrome Dyeing, Part II." It concerned the use of metachrome dyeing to eliminate the cause of troubles by iron on:

1—Shade.

2—The fastness of chrome colors by dyeing metachrome.

Both of these papers were very well received and produced an interesting question and answer period.

Respectfully submitted,

E. A. RICHARDS,
Secretary

—♦ ♦—

Philadelphia Textile Institute Student Chapter

AT a meeting on November 20th, the Philadelphia Textile Institute Student Chapter elected William Hoffman, Chairman; James Kelleher, Vice Chairman; Ellis A. Safdeye, Secretary, and Professor Percival Theel, Faculty Advisor. Membership and Program Committees were appointed. It was decided that meetings be held on the first Thursday of every month.

At the first meeting Mr. Warmsely of the American Viscose Corporation spoke on "Continuous Methods of Bleaching and Dyeing." On January 9th, P. J. Wood of the Royce Chemical Company spoke on "How To Set Up a Dye House."

Respectfully submitted,

ELLIS A. SAFDEYE,
Secretary.

Intersectional Contest—

A Study in Detergency*

Presented by the

NORTHERN NEW ENGLAND SECTION

COMMITTEE

Sawyer F. Sylvester, *Chairman*
Hugh Christison
John N. Dalton
Delbert E. Ray
Frank Rizzo
Albert E. Sampson
Wilfred A. Seneschal
Speaker
Roland E. Derby
Judge
Henry D. Grimes

Introduction

THIS paper presents a laboratory study of detergents which may be of considerable practical value in the woolen and worsted industry. As a result of the tremendous upset in world economy from the recent war and the intensive natural drought that has affected almost seventy-five percent of the earth's food supplying areas for the past two years, there is a critical scarcity of natural fats, available for food and industrial use. Consequently fatty acid soaps are scarce and apparently will continue to be so for an indefinite period. The wool textile industry is now faced with the serious problem of selecting suitable alternatives to replace soap which is not only scarce, but has risen in price to a high level.

For the past ten years the American chemical industry has made remarkable progress in the production of synthetic detergents. Fortunately, many of these do not have their derivation from animal fats but are synthesized from intermediates made from our plentiful natural resources of natural gas, petroleum and coal. Accordingly, at present prices they exist as suitable alternatives for the conventional fatty acid soaps if they can be properly evaluated from an economy and quality standpoint when compared to soap.

Due to the complex chemical structure of the active ingredient in a commercial synthetic detergent, it has been a difficult problem for the wool chemist to provide an evaluation of such a product for mill use. Physical properties such as surface tension, interfacial tension, wetting power, emulsifying properties and the like can be measured. While these characteristics present valuable information, they do not present the complete picture of how the material will function under mill conditions. Chemical methods of analysis of these products have also been developed and many laboratories have used the Atlas Launderometer and other empirical methods for evaluating their serviceability. However, these methods do not simulate the use of the detergent in the conventional mill scouring equipment and also involve the possibility of too much personal error in executing the method.

In this study of detergents we have developed a reproducible method for evaluating them as used in the mill under a variety of conditions. For this purpose we selected the Detergency Comparator developed by the Wool Detergency Subcommittee of the Research Committee of the American Association of Textile Chemists and Colorists. This apparatus is a miniature wool dolly washer made to scale from the usual mill washer. It provides a means of running duplicate tests simultaneously with a variation of the ratio of scouring liquor to cloth from 6/1 to 25/1 as desired. In addition the temperatures of both the scouring liquor and rinse water are thermostatically controlled.

In selecting synthetic detergents to compare with soap in the apparatus, we selected three chemical types, anionic, cationic and non-ionic. For the anionic type, we seleted the sodium salt of an alkyl aryl sulfonate, for the cationic type, a polyethylene ether of a fatty amine while the non-ionic was a polymerized organic alcohol with other linkages. The soap selected was a red oil soap of 95% soap content and 10° titer. These various detergents were compared without any scouring assistant and also with the following, sodium sulfate, sodium carbonate, sodium bicarbonate and sulfuric acid.

The wool material used in the tests was a 1¼ inch tubing fabric knitted from 2/40 worsted yarn of five month's age made from stock oiled in the worsted gilling process with the National Association of Wool Manufacturers' standard top lubricant, a blend of 50% mineral oil and 50% grease oil. Due to the acute shortage of fats, this type of oil represents quite generally the oils now in use in the wool textile industry for worsted lubrication.

Lampblack was added to the oil to provide an additional means of measuring the efficiency of the scouring tests. By means of reflectance measurements with the G. E. Recording Spectrophotometer, the amount of lampblack left in the fabric was indicated and together with a Soxhlet extraction test for oil in the scoured fabric gave sufficient information to evaluate the scouring properties of the various detergents.

Experimental

Following is a description of the method of running the tests in the machine: The knitted tubing was conditioned in a standard atmosphere and 76 inch strips under 1½ pounds tension were cut to provide samples of uniform length and approximate weight which varied from 13.2 to 13.8 grams when weighed in the standard atmosphere.

Duplicate samples were run in the dual detergent baths for 30 minutes at 100 to 105° F. With the high bath to cloth ratio of 22 to 1 the drains were opened and each sample was rinsed for 5 minutes at a controlled rate of flow with a liter of distilled water at 100 to 105° F. Samples were then removed from the machine and dried.

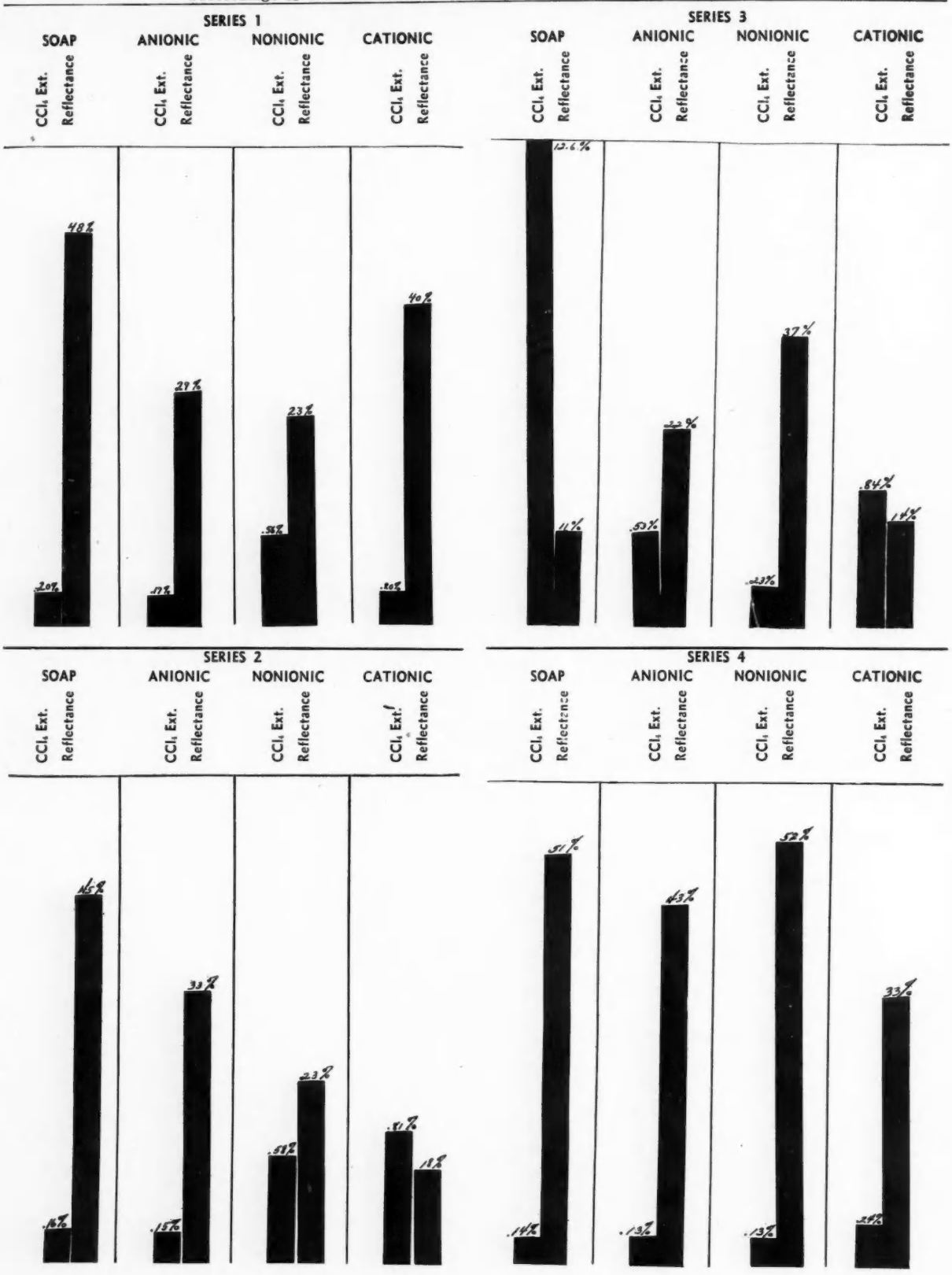
For all bath to cloth ratios other than 22 to 1, after running for 30 minutes with the detergent solution, 200 ml of distilled water at 100 to 105° F. was added and without opening the drains, the samples were run for 5 minutes. The drains were then opened and a liter of water at 100 to 105° F. was used to rinse each sample as before.

Distilled water was used for the make-up of all solutions and for rinsing to eliminate any hardness factor in the tests.

Data

Tabulation and bar graphs of the various

* Presented in Intersectional Contest, at the Silver Jubilee Convention, Hotel Statler, Boston, Mass., December 13, 1946.


SERIES 1
SOAP
ANIONIC
NONIONIC
CATIONIC
CCl4 Ext.
Reflectance
.20%
48%
.17%
27%
.58%
23%
.20%
40%
SERIES 3
SOAP
ANIONIC
NONIONIC
CATIONIC
CCl4 Ext.
Reflectance
12.6%
11%
.53%
22%
.23%
37%
.84%
14%
SERIES 2
SOAP
ANIONIC
NONIONIC
CATIONIC
CCl4 Ext.
Reflectance
.18%
45%
.15%
33%
.58%
23%
.51%
18%
SERIES 4
SOAP
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NONIONIC
CATIONIC
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Reflectance
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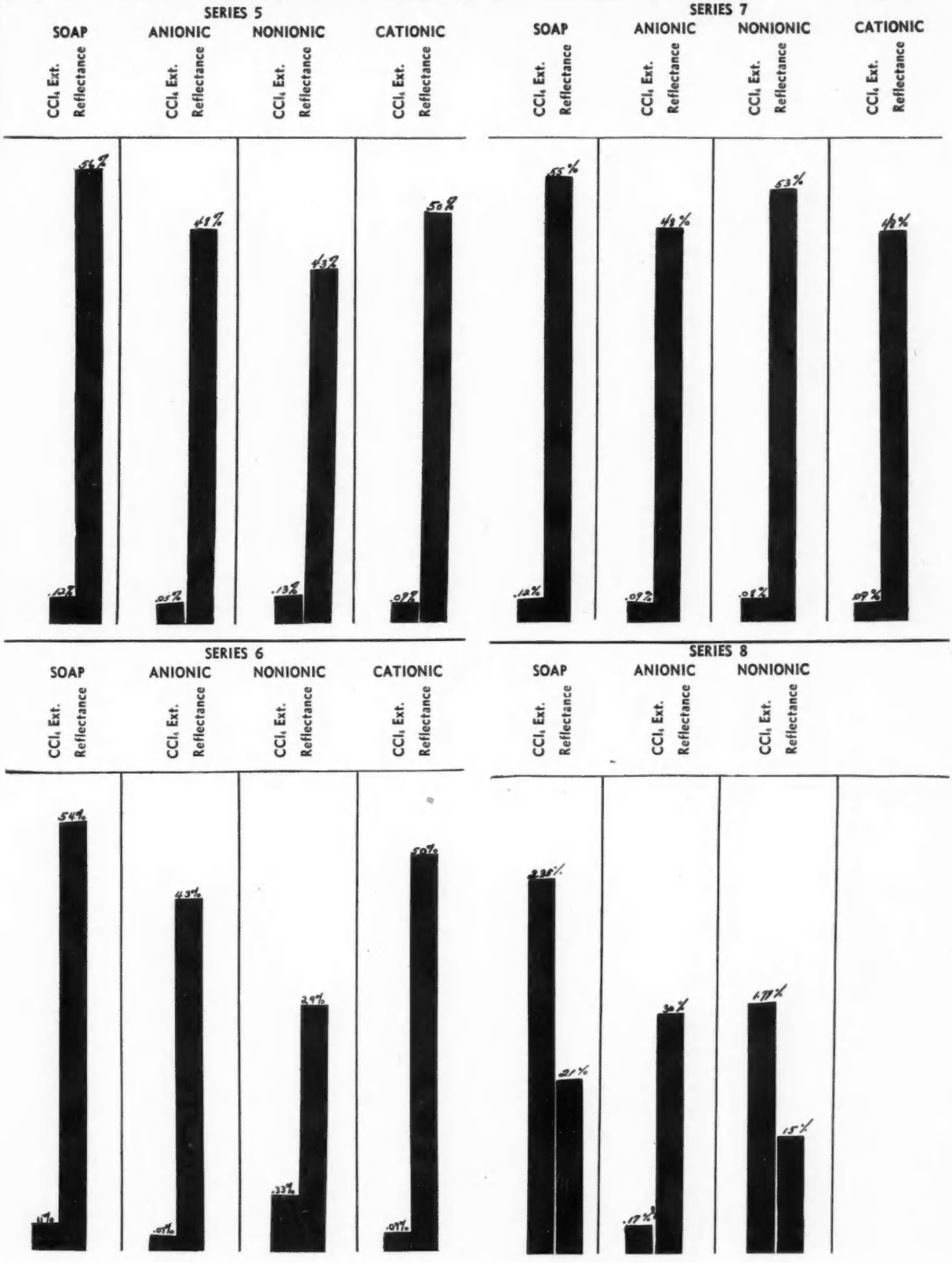
52%
.26%
33%


SERIES 5
SOAP
ANIONIC
NONIONIC
CATIONIC
CCl4 Ext.
Reflectance
.13%
56%
.05%
49%
.13%
43%
.07%
50%
SERIES 7
SOAP
ANIONIC
NONIONIC
CATIONIC
CCl4 Ext.
Reflectance
.12%
55%
.07%
48%
.08%
53%
.09%
48%
SERIES 6
SOAP
ANIONIC
NONIONIC
CATIONIC
CCl4 Ext.
Reflectance
.17%
54%
.01%
43%
.33%
29%
.01%
50%
SERIES 8
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NONIONIC
CCl4 Ext.
Reflectance
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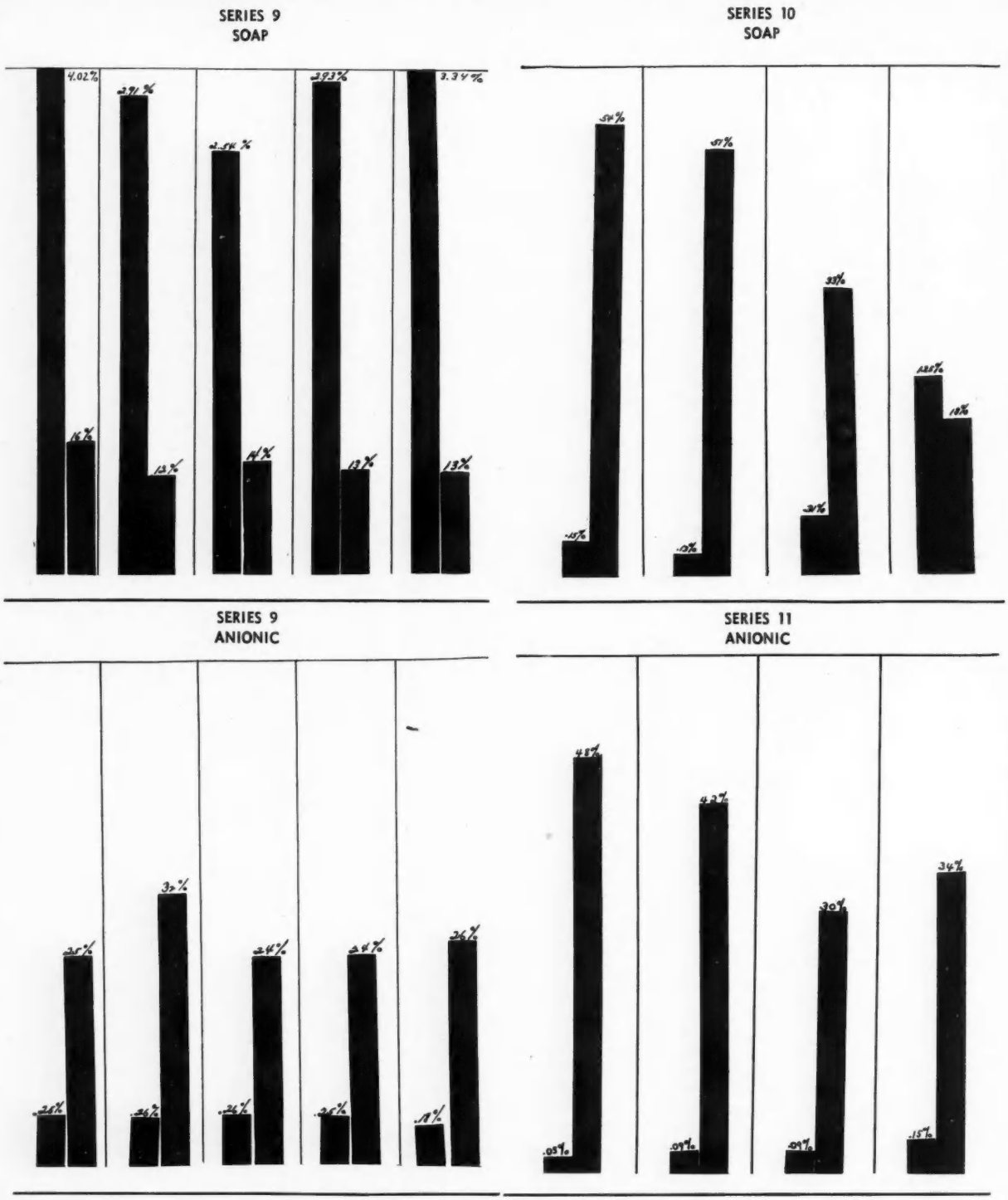
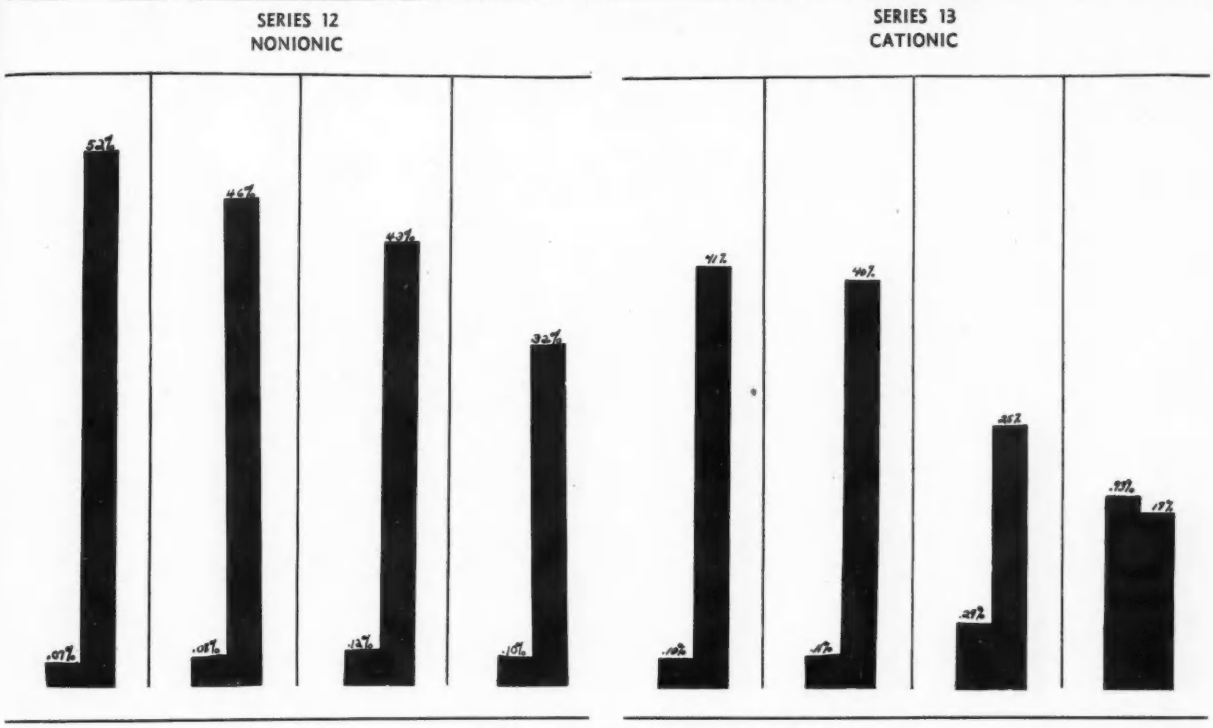
.21%
.17%
30%
.15%



series of tests are now presented. All percentages of detergents or assistants are based on the weights of the fabric samples. Bath ratios are the ratios of weight of detergent solution to the weight of fabric. pH measurements were made of the detergent solution at the beginning of the scouring operation and at the end just before addition of the rinse water. It should be noted that the maximum reflectance of the clean fabric would be approximately 60%.

The unscoured knitted tubing contained 5.0% carbon tetrachloride extractables and showed a reflectance of 11.0%.



SERIES I

Bath ratio, Approx. 22/1
11% Detergent

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	11.2	9.9	0.20%	48%
Anionic	7.1	7.7	0.17	29
Nonionic	8.0	7.0	0.56	23
Cationic	7.4	8.0	0.20	40

SERIES II

Bath ratio, Approx. 22/1
11% Detergent plus
2.2% Sodium Carbonate

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	10.2	9.4	0.16%	45%
Anionic	10.6	9.5	0.15	33
Nonionic	10.5	9.7	0.58	23
Cationic	10.9	9.7	0.81	18

SERIES III

Bath ratio, Approx. 22/1
11% Detergent plus
2.2% Sulfuric Acid

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	3.8	5.3	12.6%	11%
Anionic	3.3	3.8	0.53	22
Nonionic	2.9	4.1	0.23	37
Cationic	2.0	3.2	0.84	14

SERIES IV

Bath ratio 22/1
11% Detergent plus
22% Sodium Sulfate

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	9.5	8.3	0.14%	51%
Anionic	6.1	6.4	0.13	43
Nonionic	7.2	6.5	0.13	52
Cationic	7.4	7.0	0.24	33

SERIES V

Bath ratio 22/1
11% Detergent plus
22% Sodium Bicarbonate

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	8.6	9.1	0.12%	56%
Anionic	8.1	9.1	0.05	48
Nonionic	8.4	8.9	0.13	43
Cationic	8.4	9.2	0.09	50

SERIES VI

Bath ratio 22/1
11% Detergent plus
11% Sodium Bicarbonate

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	8.7	9.1	0.11%	54%
Anionic	8.2	9.0	0.07	43
Nonionic	8.2	9.2	0.33	29
Cationic	8.4	9.3	0.09	50

SERIES VII

Bath ratio 22/1
11% Detergent plus
22% Sodium Carbonate

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	10.9	10.3	0.12%	55%
Anionic	11.1	10.3	0.09	48
Nonionic	11.1	10.4	0.08	53
Cationic	11.0	10.7	0.09	48

SERIES VIII

Bath ratio 10/1
5% Detergent

Detergent	pH Start	pH Finish	CCl_4 Ext.	Reflectance
Soap	10.0	8.7	2.35%	21%
Anionic	6.3	7.1	0.17	30
Nonionic	6.9	7.4	1.79	15

SERIES IX

Detergent	Bath Ratio	pH	CCl_4 Ext.	Reflectance
5% Soap	2/1	9.8	4.02%	16%
5% Soap	3/1	9.9	2.91	12
5% Soap	4/1	9.9	2.54	14
5% Soap	6/1	10.0	2.93	13
5% Soap	8/1	9.9	3.34	13
5% Anionic	2/1	5.3	0.25%	25%
5% Anionic	3/1	5.2	0.26	32
5% Anionic	4/1	5.0	0.26	24
5% Anionic	6/1	5.6	0.25	24
5% Anionic	8/1	5.3	0.18	26

SERIES X

Bath Ratio 6/1
6% Sodium Carbonate

% Soap	pH Start	pH Finish	CCl_4 Ext.	Reflectance
10	11.0	10.0	0.15%	54%
5	11.1	10.0	0.13	51
2½	11.2	10.0	0.31	33
1¼	10.8	10.0	1.25	18

SERIES XI

Bath Ratio 6/1
6% Sodium Carbonate

% Anionic	pH Start	pH Finish	CCl_4 Ext.	Reflectance
20	10.7	9.6	0.05%	48%
10	11.0	10.1	0.09	42
5	11.0	10.0	0.09	30
2½	11.2	10.2	0.16	34

SERIES XII

Bath Ratio 6/1
6% Sodium Carbonate

% Nonionic	pH Start	pH Finish	CCl_4 Ext.	Reflectance
20	11.0	10.2	0.07%	52%
10	11.2	9.8	0.08	46
5	10.9	10.2	0.12	43
2½	11.3	10.0	0.10	32

SERIES XIII

Bath Ratio 6/1
6% Sodium Carbonate

% Cationic	pH Start	pH Finish	CCl_4 Ext.	Reflectance
20	11.0	10.1	0.10%	41%
10	11.2	10.5	0.11	40
5	11.1	10.1	0.29	25
2½	11.4	10.4	0.93	17

Discussion

A careful examination of the experimental data indicates that the trend of the effects of several factors should be discussed separately. In this way some general conclusions can be drawn and suggestions for additional research may be discovered. These factors are discussed in the following paragraphs.

Detergency Comparator

In general it appears possible by the use of this machine to demonstrate relative efficiencies of different detergents and conditions of scouring. The value of this machine is amply illustrated by Series 10 and 15 in which the effects of small differences in soap concentration are clearly defined under the conditions employed.

The Bath Ratio:

This is an important consideration in a laboratory study of detergents as mill scouring operations are usually carried out in short baths. In this study we varied the bath ratio from 22 to 1 to 2/1. Mill scouring is generally in the range of 2 to 1 to probably 4 to 1. In our laboratory machine it was not feasible to go much lower than 6 to 1.

It was found that if the ratio was less than this, the samples were either not completely wet out or there was not enough detergent solution to drain back through the suds box to the washer bottom.

Effect of Sodium Carbonate:

The effect of adding sodium carbonate to the detergents is striking. Changing the amount from about 2% to 22% has a decided effect upon the reflectance measurements in the long bath (22/1) scouring of all the detergents, the greatest effect being upon the soap. In the short bath of 6/1, 6% sodium carbonate shows excellent reflectance tests with soap and much improved results with the nonionic detergent.

Effect of Sodium Bicarbonate:

Addition of sodium bicarbonate has an effect on all the detergents similar to that of sodium carbonate. There do not appear to be any better results with the bicarbonate and in most cases the reflectance tests are better with the carbonate.

Effect of Sodium Sulfate:

It was desired to observe the effect on the detergents of the use of a neutral electrolyte. Series IV shows the results by the addition of 22% sodium sulfate. This salt definitely has considerable effect on both the oil removal and reflectance giving much better results than when the detergents alone were used as shown in Series I.

Effect of Sulfuric Acid:

Occasion does arise in mill practice for scouring sulfuric acid carbonized cloth without prior removal of the acid. The effect of acid on the detergents under investigation is shown in Series III. Apparently the nonionic detergent gives the best results as to oil removal, although the reflectance measurement is somewhat low.

Effect of Concentration of the Detergent:

Series X, XI, XII and XIII show the effect of varying the percentage of detergent with a 6/1 bath ratio. These tables show that there is a definite relation between a limiting concentration of detergent used and the efficiency of the scouring. For each detergent there is a critical value between 5 and 10% which produces the best overall results.

Series 9 represents the results obtained in experiments at lower bath ratios. Although these results indicate that in the absence of assistants the synthetic anionic detergent is better than soap, we have not proven this in our other tests and a satisfactory explanation may require further data.

Summary

A study has been made with the Detergency Comparator developed by the Wool Detergency Sub-committee of the A.A.T.C.C. Under the conditions employed the machine gave reproducible results and showed clearly the effects of variations in the factors studied.

The scouring efficiency of soap was compared to that of synthetic anionic, nonionic and cationic detergents. These detergents were studied under conditions which closely adhere to mill practice in the worsted and woolen industry.

The variables studied were bath to cloth ratio and additions of sodium carbonate, sodium bicarbonate, sodium sulfate and sulfuric acid. In practically all cases sodium carbonate appeared to be the best assistant with the detergents tested although all of the salts proved to be of value. Their effect may be to drive the detergents to the oil-water interfaces.

Synthetic detergents show excellent results for removal of this type of oil but are not as good as soap for lampblack removal.

A general conclusion would be that 10% of each detergent with 6% of sodium carbonate to give an initial pH of about 11.0 produces excellent overall results in oil and lampblack removal.

It is our belief that this study can be of great value to the wool industry at the present time. It offers to the wool chemist a practical and reproducible method for evaluating detergents to replace fatty acid soaps which are so scarce and expensive at the present time.

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March Meeting New York Section

THE next meeting of the New York Section will be held on Friday, March 7th at the Swiss Chalet, Rochelle Park, New Jersey at 8:30 P.M.

H. E. Millson will present, and illustrate with colored slides, the prize-winning Intersectional Contest Paper given at the Silver Jubilee Convention in Boston and entitled: "The Tippy Dyeing of Wool and Its Control." The second paper will be presented by S. H. Williams of Charlotte, N. C., on the subject: "The Williams Unit: Its Use in Textile Processing."

An informal dinner, at 7:15 P.M. will be served to those who purchase tickets by Tuesday, March 4th. Tickets, at $4 each, are available from the Treasurer, John H. Hennessey, General Dyestuff Corp., 435 Hudson Street, New York 14, N. Y.

CALENDAR OF COMING EVENTS

EXECUTIVE COMMITTEE ON RESEARCH
Meeting: March 20. (Hotel Pennsylvania, New York)

NEW YORK SECTION
Meetings: March 7, May 2. (Swiss Chalet, Rochelle Park, N. J.)

RHODE ISLAND SECTION
Meeting: February 28. (Johnson's Grill, Providence)
Meetings: March 28, April 25.

PHILADELPHIA SECTION
Meetings: February 28, April 11, May 23.

NORTHERN NEW ENGLAND SECTION
Meetings: March 21, April 11, May 16, September 26, November 21.
Outing: June 13.

PIEDMONT SECTION
Meeting: April 12. (O. Henry Hotel, Greensboro, N. C.)
Outing: June 20 and 21. (Ocean Forest Hotel, Myrtle Beach, S. C.)

RESEARCH COMMITTEE
Sub-Committee Meetings: March 20. (Hotel Pennsylvania, New York.)
Meeting: March 21. (Hotel Pennsylvania, New York.)

COUNCIL
Meeting: March 21. (Hotel Pennsylvania, New York.)

NATIONAL CONVENTION
October 23, 24, 25. (Congress Hotel, Chicago, Ill.)

EMPLOYMENT REGISTER

This column is open for four insertions per year, per member, without charge. Blanks can be obtained from, and filed with, the Secretary of the Association, Lowell Textile Institute, Lowell, Mass. It is understood that these will be open to inspection by prospective employers, who can obtain further information through the code numbers from the Secretary.

47-23

Education: High school and part college.
Experience: 17 years, mainly with one company, application laboratory work on variety of dyes and fibers, including printing and resin bonded pigments, with executive responsibilities.
Age 36; married; references; will go anywhere in U. S.

47-24

Education: High school, and courses in R. I. School of Design.
Experience: Boss dyer, wool raw stock, cotton.
Age 50; widower; references from all employers; will go anywhere in U. S.

• PATENT DIGEST •

Lubricating Acetate Staple Fibers A, 7, 01

U. S. Pat. No. 2,406,407 (Celanese Corp. of America, Schiessler, Aug. 27, 1946).

U. S. Pat. No. 2,406,408 (Celanese Corp. of America, Seymours-Brooks, Aug. 27, 1946).

Conditioning of staple fibers, made from cellulose acetate has generally been carried out at room temperature by impregnation with an aqueous emulsion. After removing the water the agent is left uniformly distributed upon the fiber. Many sulfonated or sulfated products have been used for this purpose. The inventor observed that the anti-static properties of these fibers are substantially improved *by warming* these impregnating agents at temperatures somewhat higher than room temperature (40-50° C). Thereby the staple fibers can be spun in a more even and smooth way. An example mentions a staple fiber treatment with an agent containing partially sulfonated oleic acid and partially sulfonated peanut oil in an aqueous emulsion, used at slightly elevated temperatures.

Another lubricating treatment of cellulose acetate fiber is protected by the second patent. It is intended to lubricate the acetate fibers and to prevent at the same time accumulation of static electricity. Moreover the substances mentioned in this patent impart a certain degree of friction to the fibers which property facilitates processing of the yarns and protects the surface of the individual fibers from sticking together by polymerization. These agents are therefor built up from several components: a mineral oil, a fatty acid such as oleic acid and sulfuric acid are reacted. To this reaction product a vegetable oil, triethanolamine and alkali are added. A small portion of alkylphenol, for instance diamylphenol, is stirred in to prevent oxidation. The alkaline ingredients have to neutralize the sulfuric acid as well as the fatty acids contained in this composition.

Earlier work, done in this field: A former patent of Celanese (U. S. Pat. No. 2,385,-423 recommends a combination of mineral oil, oxidized oils, sulfonated olive oil and some other additional products for lubricating acetate cellulose threads from a water free mass. U. S. Pat. No. 2,176,402 (Enka-Koch) describes mixtures of butylstearate and mineral oil to which amines and sulfonated olive oil are added as lubricating agents for rayon.—Quite generally esters, amides or ester amides of alkyolamines combined with higher fatty acids can be used as yarn lubricating agents according to U. S. Pat. No. 1,985,687 (I. G. Farben Ind.).

PAUL WENGRAF

Acryl —or Vinyl Polymerisates Emulsified, as Finishing Agents G, 2, 01

U. S. Pat. 2,406,453-54 (Imper. Chem. Ind., Charlton-Jarrett-Walker, Aug. 27, 1946).

A treatment of textiles (and paper) described in these two patents tends to polymerize and fix compounds of the acryl- or vinyl-type on any porous material. It is known to use persulfates or persulfuric acid as a polymerizing catalyst. This reaction has to be carried out in the absence of oxygen of the atmosphere and therefor the persulfate has to be mixed with an "oxygen acceptor" particularly hydrosulfite or sulfurous acid. The process can be accomplished in two different ways: the unsaturated compound can be volatilized by bubbling carbon dioxide through the heated substance (first patent) or it is applied in form of an emulsion (second patent). In case of applying the agent in vaporized form, the fabric has first to be prepared in an impregnating solution of persulfate, persulfuric acid and hydrosulfite. In case of impregnating the fabric directly with an emulsion the persulfate—catalyst solution is applied in a separate, subsequent bath. An example may be given for this second modification: an emulsion of beta- ethoxy-ethyl methacrylate is prepared, using starch and oleylsulfate of sodium as emulsifying and protecting agents. After removing the excess liquid a second impregnation is given in a jigger at 40° C during 15-30 min. with a solution of ammonium persulfate, sodium hydrosulfite and water. After drying a washfast, rather stiff finish results. The weight increase was 20-30% and went in some cases up to 50%.

Some references regarding finishes with emulsions of polymerized compounds: U. S. Pat. No. 2,395,812 (Imp. Chem. Ind.—Gudgeon-Blackley) describes permanent finishes, prepared from emulsions of alkylesters of 1-carboxy-butadiëne—1-3, the alkyl containing 1-4 carbon atoms. Brit. Pat. No. 568,884 (Shawinigan Chem.): insoluble vinyl—or acrylesters are emulsified with "Aerosol OT" and a protective colloid such as glue and polymerized in the presence of a peroxide catalyst. U. S. Pat. No. 2,393,007 (Wingfoot) recommends for permanent finishes co-polymers of butadiëne and acrylonitrile in emulsion. "Aresket"—a sulfonated diphenyl—is used as emulsifier and perborate as a polymerizing catalyst; atmospheric oxygen is excluded in the polymerizing reaction.

Starch Pastes—Increasing Viscosity D, 1

U. S. Pat. 2,407,071 (Staley Manuf. Co., Gill-McDonald, September 3, 1946).

Thick starch pastes are obtained by reacting under carefully maintained thermal and other conditions starch with dimethylolurea or other resin forming substances in a water soluble form, for instance also melamin-formaldehyde-precondensates. Quite generally the starch has to be suspended in water to form starch milk, the pH value is adjusted to 1.5-7.0, thus to an acid to neutral state and heated at 125° F. 0.05 — 2% dimethylolurea (calculated on the weight of the starch) are added and the mixture is kept at this temperature for five hours under continuous stirring. The pH has to remain in the vicinity of 4. A large increase of viscosity is obesrved. In an example 100 p, native corn starch, 100 p. water, 0.2 p. dimethylolurea or the same quantity of melamin-formaldehyde-precondensate (monomer) are reacted. It has to be emphasized that this product is first dried and later on used in the form of dry granules for preparing thick pastes by dissolving them in boiling water.

Former references: U. S. Pat. No. 2,385,-714 (Stein, Hall): Starch finishes mixed with urea-formaldehyde precondensates (dimethylolurea) and polyvinyl compounds (content on dimethylolurea 17%). U. S. Pat. No. 2,385,438 (Chem. Devel. Inc.): One part starch is suspended in 0.25—4 parts water dispersible urea-formaldehyde precondensate. U. S. Pat. No. 2,342,785 (Rohm & Haas): Starch is insolubilized with methylol-allyl-urea. Most of the known processes intend to prepare insolubilized permanent finishes, while this invention tends to increase the viscosity of starch preparations using very small quantities of these condensates.

THE following British Patents have been abstracted according to reports in "The Dyer" (London) because the originals are not yet available in this country at the present time:

Cellulose Acetate Dyeing with Vat Dyestuffs C, 4, 07

(From "The Dyer," August 16, 1946 p. 167)

Brit. P. 578,212 (Brit. Celanese)

Cellulose acetate can be dyed according to the pigment padding method, provided that the second developing bath is of a very low alkalinity so that the fibers cannot be saponified in this process. An ex-

ample describes an impregnation with Indanthrene Khaki 2 GA double paste. Following the padding process the fabric is dried at 90° C. and treated with a very dilute solution of sodium hydrosulfite — sodium carbonate at 45° C. for about 20 min. This treatment is sufficient to reduce the dyestuff without endangering the structure of the fiber.

General references, regarding treatment of acetate cellulose for vat dyeing purposes: USP 2,049,431 (Dreyfus) recommends a cautious treatment with calcium hydroxide instead of caustic alkali to avoid extreme saponification. Brit. Patent 440,-034: suggesting a treatment with organic amines. French Patent 765,960 (Rhodiaceta): instead of caustic alkali a milder reacting basic substance such as magnesium hydroxide is added to the vat dyeing bath in dyeing cellulose acetate. Brit. P. 388,044 (Imp. Chem. Ind.): alkaline reacting alkaliphosphates are used instead of caustic alkalies in vat dyeing cellulose acetate.

Shrinking Woolen Fabrics—Steam chamber G, 2, 04

(From "The Dyer" Sept. 13, 1946, p. 263)

Brit. P. 578,389 (Ansett)

The present patent intends to provide a simple and efficient device to shrink wool fabrics in length and width by subjecting them to a steam treatment. The invention is generally but not exclusively suitable for knitted goods. The fabric (7) is delivered to a conveyor (6) having the form of an endless apron and transporting the goods in horizontal direction to the inlet of the steam chamber (8). Here it passes over a steam box (10) before entering the steam chamber. The fabric is carried thereupon to another conveyor (14) running in a horizontal direction too. Here it is transported between (14) and an upper co-acting travelling belt (17) whose speed is equal to that of (14). At the outlet of the steam chamber the fabric is led into a drying chamber (20), travelling in this part of the device in an upwardly inclined direction together with the conveyor belt (21). The essential point in this invention is seen in that the speed of the conveyor (5), carrying the fabric to the inlet of the steam chamber, is greater than that of conveyor (14), transporting the fabric during the steam treatment. This reduction in speed causes the fabric to wrinkle and practically "to float" under the steam pressure. In an example a fabric treated with steam of 60 1lb. per square inch at a temperature of 150° F. shrunk from 9 yards to 7 yards, 2 feet, 8 inches and in width from 21.5 to 20¼ inches.

The process differs from the well known Sanforizing method in that pre-wetting of the fabrics is not required and therefore distortions sometimes caused by an application of local pressure are avoided.

Resin Finishes, fixed by Superheated Steam G, 2, 01

(From "The Dyer" August 16, 1946 p. 166)

Brit. P. 577,982

(Dunlop Rubber Company-Illingworth)

It has been found that textile materials, impregnated with resin forming substances, are dried with a better effect in superheated steam than in hot air of the same temperature. The material to be treated according to this invention is a viscose rayon woven cord, consisting of parallel cords which are not interwoven as usual with a normal filling but only held together by comparatively weak horizontal threads placed in large intervals (larger than the distance between the cords). These products are prepared with rubber latex and resin forming components and after curing used for making tires. But the fact that these resin impregnations are best fixed by superheated steam might quite generally be useful also in other textile finishing processes.

References: Brit. P. 570,696-97 (Courtaulds-Atkinson): the patent suggests using formaldehyde pre-condensates for impregnating cotton fabrics and heating these fabrics on a tenter frame with live steam at temperatures of about 135-140° C. Brit. P. 437,642 (1935 Calico Printers Association) describes also a steam curing treatment but in this case the fabrics were impregnated with the amine component of the resin and subjected to steam carrying formaldehyde vapors.

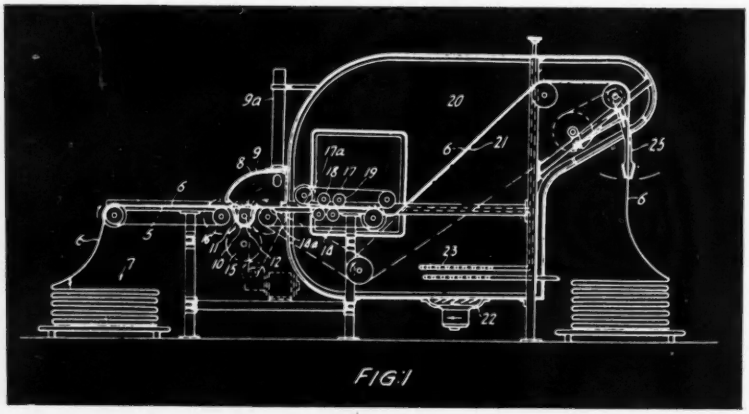


FIG. 1

Bleaching with Chlorite Additions of Persulfate or Aldehyde B, 1

(From "The Dyer" July 16, 1946, p. 76)

Brit. P. 576,909/10

(Mathieson Alkali Works-Hampel)

It has been found that a great variety of organic materials, (besides cellulose) can be bleached with chlorite solutions plus persulfates (first patent) or chlorites plus aldehydes (second patent). The examples relate to cellulose acetate fabrics which are immersed in these solutions for one to two hours rinsed and dried.— The persulfate containing bath has a pH value of 4; the goods were immersed therein for two hours. The formaldehyde-containing bath was buffered at pH 7 and gave a satisfactory result after one hour's immersion at a temperature of 60° C.

References: The USPat. 2,367,771 corresponding to the Brit. P. 576,910 (addition of aldehyde to chlorite) has already been published in January 1941, while the USPat 2,358,823/1944 corresponds to Brit. Pat. 576,909. Other assistants to chlorite baths, proposed by the same company were for instance peroxide-yielding compounds according to USP. 2,358,866.

Transparentizing Fabrics—Combining with Mercerizing Treatments G, 2, 01

(From "The Dyer" July 5, 1946, p. 32)

Brit. P. 577,233

(A. G. Cilander, Herisau, Switzerland)

The patent describes a process for obtaining plain or patterned transparent effects on staple fiber fabrics. Three steps are characteristic for the method: the first two steps comprise swelling processes with cold alkaline lyes and/or concentrated sulfuric acid and the third step consists of a mercerizing aftertreatment. But the order and manner in which the swelling and mercerizing agents follow is not always the same; it depends on the desired effects. Many variations are dis-

closed; for instance, one of the examples teaches to treat first for 8 sec. with sulfuric acid 45° Bé at 15° C., then, after neutralisation, mercerizing and treating with a bath containing a sodium carbonate solution of 30° Bé at 50° C.

Information about parchmentizing processes with preceding or subsequent mercerizing treatment can be found in the company's former Brit. P. 415,585: mixed rayon-cotton fabrics are treated with transparentizing sulfuric acid (49° Bé) in such a way that only the rayon part is transparentized. In a subsequent mercerizing operation the cotton alone shrinks whereby a crepe-effect is obtained. Brit. P. 464,965: sulfuric acid treatment of linen at normal temperatures followed by a mercerizing operation. This treatment has a purifying effect.

Waterproofing Nylon—Zelan Treatment G, 2, 02

(From "The Dyer," July 19, 1946 p. 75)
Brit. P. 577,433 (Imp. Chem. Ind.-Dunbar et al.)

Nylon is made still more water repellent by treating it with dispersions of "Velan PF" (Zelan) or generally with heat decomposible quaternary ammonium compounds. Also wax emulsions can be used for aftertreating nylon fabrics. (the brands "Dipsanol V" or "Waxol W" are particularly recommended). According to an example nylon fabric is passed through a Velan-dispersion (80 p. Velan, 65 p. methanol, 27 p. sodium acetate, made up to 100 parts), air dried and baked at 150° C., rinsed, soaped, rinsed and dried.

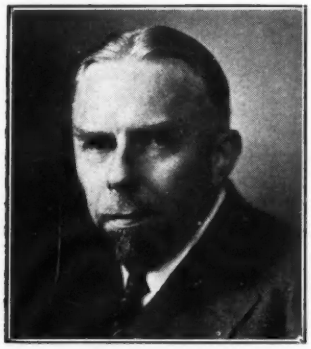
Earlier work done in this field: USP 2,310,873 (du Pont) describes a process consisting in chlorinating dioctadecyladipamide (or another similar acid diamide, being the initial material for nylon manufacturing but not yet polymerized) and combining it with pyridine: a Zelan-like product is obtained which is used as a waterproofing agent. USP 2,216,406, probably parallel to the patent mentioned here above, protects a "Zelan" treatment of nylon fibers for waterproofing purposes.

TRADE NOTES • NEW PRODUCTS

OBITUARY

DR. HAROLD D. W. SMITH

DR. HAROLD DeWITT SMITH, Treasurer and Textile Technologist of A. M. Tenney Associates, Inc., died on Monday, February 10th, while on vacation in Mexico City. He was 50 years old.



Dr. H. D. W. Smith

Dr. Smith was born in Bayonne, N. J. and was graduated in 1920 from Lehigh University with a degree in chemical engineering. He had previously seen service in World War I as a second lieutenant of infantry. He spent two years in the rubber and vegetable oil industries after graduation. He then joined Wellington Sears as a textile chemist.

In 1927 he went with the Kaiser Wilhelm Institute for Fiber Chemistry in Dahlem, Germany, where he worked until 1930. In 1930 he received his doctor's degree in chemistry from the University of Berlin.

When he returned to this country he joined A. M. Tenney Associates as treasurer. In 1932 he was placed in charge of sales service and developing new uses for rayon.

Dr. Smith was universally recognized as an expert on rayon, delivering many lectures and writing numerous papers on the subject. He helped organize the rayon course at the Philadelphia Textile Institute. During the recent war he was in charge of the synthetic fiber research group that worked with the office of the Army Quartermaster General.

Dr. Smith was a former president of the Textile Research Institute. He was a member of AATCC and a fellow and life member of the Textile Institute of England.

He is survived by a widow and a brother.

• Strodex D

"Strodex D," a synthetic detergent for use on delicate shades, has been developed by the Textile Chemical Division of Dexter Chemical Corporation of New York City. This is a smooth, cream-colored paste, readily soluble in water at 120 to 125 degrees.

For scouring, its range is claimed to be wider than that of soap, which in some cases it can replace. Its resistance to hard water, acids, alkalies and salts is said to be high and it is easily rinsible. No more is required in hard, than in soft water and when used in hard water, no scum forms and no precipitation appears. Even weak solutions are said to show a fine strong lather and the concentrations of acids or alkalies normally used in textile processing do not affect the action of "Strodex D." It is stable enough to be used in solutions of oxidizing agents, according to the statement from the Dexter laboratory.

• 78 Applications for N. E. T. F. Scholarships

George T. Metcalf, Executive Secretary of New England Textile Foundation, 68 South Main Street, Providence, R. I., reports that a total of 82 applications for Foundation Scholarships from high school graduates or seniors throughout the nation were recently submitted to the four textile schools in New England and that 78 of these applications were approved and 4 rejected, on the basis of the student's record in high school. The schools involved are Bradford-Durfee Technical Institute of Fall River, Lowell Textile Institute of Lowell, New Bedford Textile Institute of New Bedford and Textile School of Rhode Island School of Design, Providence.

The fact that the applicants have been approved by the textile schools does not assure them scholarships. These applicants still have to take a competitive examination on April 12th given by College Entrance Examination Board and only those with satisfactory scores will be awarded scholarships,—not more than 40 in all. Awards will be on a strictly competitive basis, without regard to where the student is located. Approved applicants were distributed over states as follows:—

Connecticut—4; Illinois—1; Maine—3; Massachusetts—28; New Hampshire—1; New Jersey—6 New York—25; Rhode Island—8; South Carolina—1; Vermont —1.

This distribution illustrates the fact that the N. E. T. F. scholarships make it possible for students from any part of the country to gain admission to a New England textile school at a time when it is difficult to obtain admission through ordinary channels.

• Philadelphia Alumni Dinner

At a recent meeting of the Executive Board of the Philadelphia Textile Institute Alumni Club of New York, J. Kenneth Taylor, President of the club, announced plans for the 1947 "Get Together" dinner to be held in the Della Robbia Room of the Vanderbilt Hotel on Friday evening, March 7th.

Harry Delaney of Meinhard, Greef & Co. will act as toastmaster and sound the note for a gay, carefree evening. Speakers and special events will be announced in the near future.

All Philadelphia Textile Institute men and women in the Metropolitan New York area are invited to attend. Any alumni not now on the Club's mailing list are urged to communicate with Edwin Wilkinson, Corresponding Secretary of the club, at 386 Fourth Avenue, New York City (Room 1208).

• Discontinue "Crown" Tested Plan

American Viscose Corporation announced on February 6 its intention to discontinue the "Crown" Tested Plan, which it has maintained since 1930 to encourage and assist in continual improvements in rayon fabric serviceability.

The company's announcement states that: "The 'Crown' Tested Plan has completed its job; and we are now discontinuing it. Many of the trade's leaders are now doing their own quality control, not for altruistic reasons, but because they believe it is good business. Now that a foundation has been laid, we are turning over the job of quality control to the textile producing and converting trades, to whom we believe this job rightfully belongs."

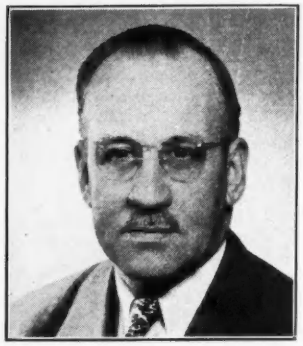
The former "Crown" Tested Department will henceforth be known as the Converting Trade Relations Department. It will continue to render all possible service to the textile trade toward improving rayon fabric quality. It will also continue to maintain the manual of fabric performance requirements which has been so widely accepted by the trade. Another important part of its work will be to continue the research needed to keep these standards and test methods alive and up-to-date.

In discontinuing the "Crown" Tested Plan, American Viscose Corporation states that it relinquishes none of its devotion to the ideal of rayon fabric quality. It believes that this ideal has been the strongest single factor in the growth and success of the rayon industry, and it will continue to do everything possible to encourage and assist the trade toward the achievement of this ideal.

• Polyethylene Glycol Esters

The Quaker Chemical Products Corp. of Conshohocken, Pa. has begun the manufacture of Polyethylene Glycol Esters. These materials are finding ever-increasing usage in the manufacture of pharmaceutical preparations, inks, paints, perfumes, wax polishes, etc. By varying the chemical structure of the base materials used in manufacture, esters having any desired degree of water or oil solubility may be obtained. Various members of the ester group are finding wide application as plasticizers, emulsifiers, dispersing and wetting agents. Marked improvements in quality and characteristics of paints, inks, etc., have been obtained in a great many cases through incorporation of small percentages of Polyethylene Glycol Esters in product formulation.

• Joins Monsanto



George O. Linberg, veteran of the New England textile chemical sales field, who has been appointed sales manager of Monsanto Chemical Company's textile chemical department. Mr. Linberg will direct textile chemical sales under a national textile products expansion program involving several million dollars in new plants and facilities. The textile department is part of Monsanto's Merrimac Division with headquarters in Boston and plant facilities at Everett, Mass. The department serves as a company-wide sales and development agent for Monsanto products applicable to the textile field. Mr. Linberg will assist Dr. Donald H. Powers, director of the department, and he will work in conjunction with Promotion Manager Nate L. Crabtree and Sawyer Sylvester, head of the department's technical developments.

Mr. Linberg is a native of Boston and graduate in 1911 from Pratt Institute in Brooklyn, N. Y. After graduation he served as a colorist for a dyestuff importing firm in New York and later served as a dyer and finisher for a worsted company. In 1916 he became manager of a New York dyestuff firm, and toured South America in the sale and demonstration of dyestuffs prior to becoming chief colorist in 1919 for the Newport Chemical Works standardization laboratory at Passaic, N. J. In 1921 he began sales work for the Newport company and continued in that field after the company was acquired by duPont.

Mr. Linberg was general chairman of the Silver Jubilee Convention of the AATCC held last December in Boston and is chairman of the Northern New England Section. He is a member of the Textile Research Institute and the Rubber Division of the American Chemical Society in Boston.

BOOK REVIEW

Textile Chemical Specialty Guide

1946-7 edition. 408 pages including indexes. Format 9" x 6". $5.00 in U. S. A. and Canada; $6.00 foreign countries. Textile Book Publishers, Inc., New York 16, N. Y.

This is the fourth edition of this well-known buyers' guide to textile chemical products. It contains the offerings of 193 American manufacturers and lists them first by company so that a firm's entire output in the field can be seen at a glance.

The products are then classified according to their use. Here the reader will find all the acids, detergents, boil-off assistants, etc. listed under those headings together with the company that makes them, and in most cases—their chemical composition. Finally, there is an alphabetical list of the products—2000 of them—by name with their companies.

This book is particularly valuable at this time because of the many changes which have occurred in the chemical supply field. The editor is H. R. Mauersberger, technical editor of *Rayon Textile Monthly*. He supplies in this guide, a useful aid to all who buy, sell or use chemical specialties in our textile mills.

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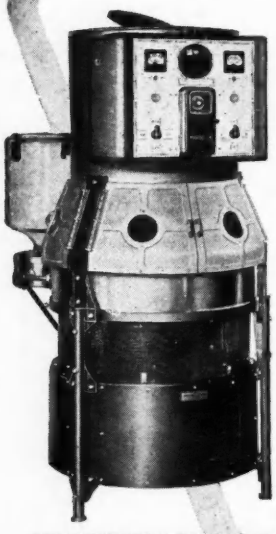

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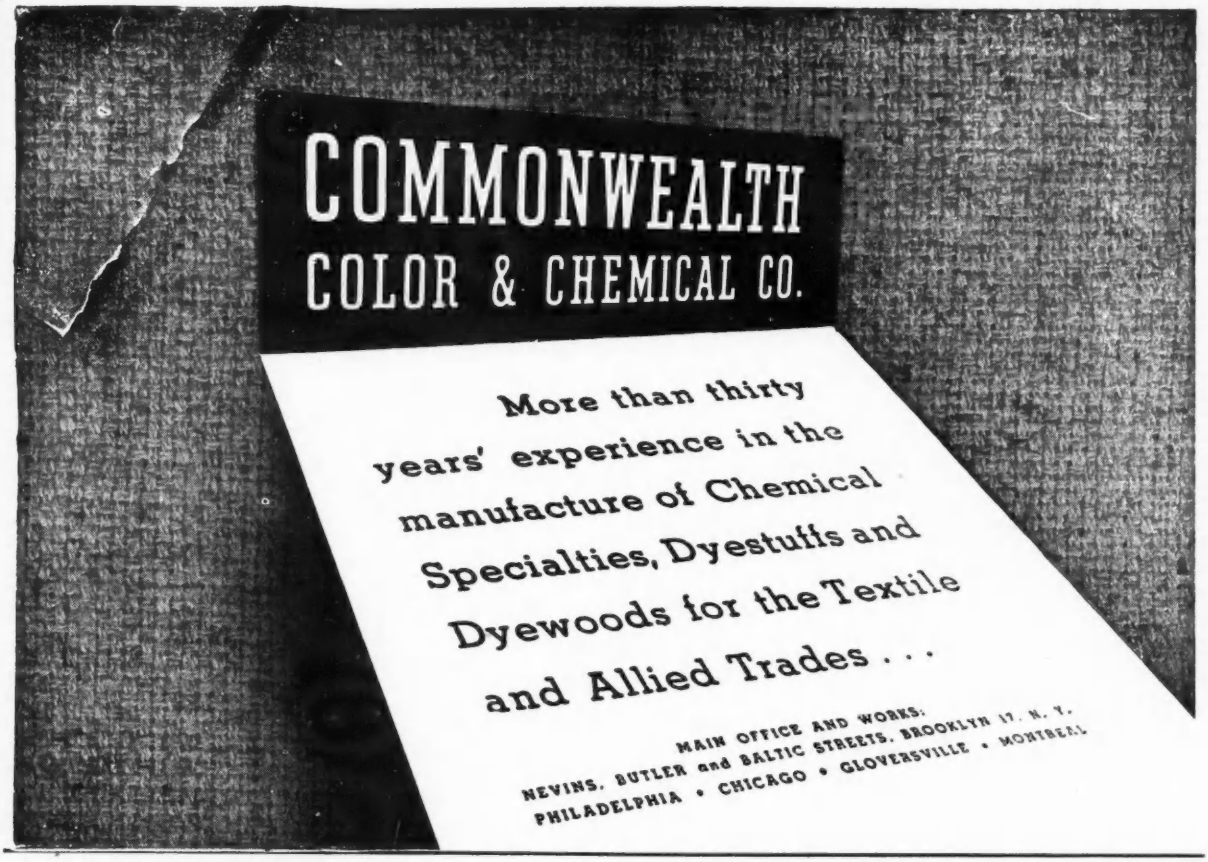
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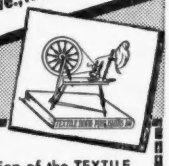

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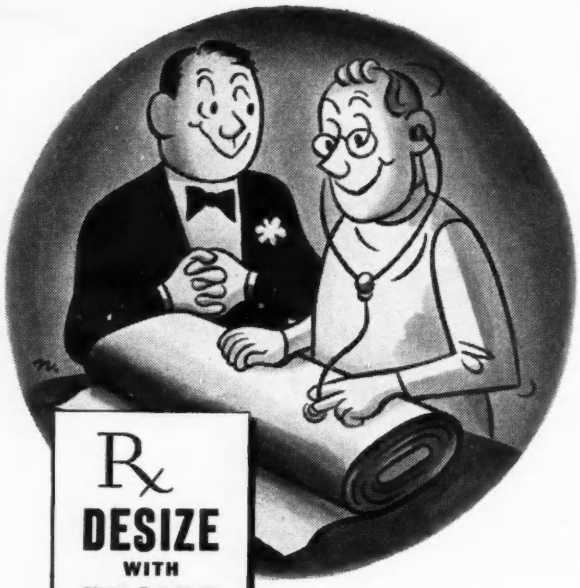

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New York 10, N. Y.

• CLASSIFIED ADVERTISEMENTS •

The rate for "Position Wanted" advertisements in this column is 2 cents a word—with a minimum of 50 cents per insertion. For all other types of advertisements—i.e., help wanted, machinery or supplies for sale—the rate is $7.50 per column inch or less per insertion.

CONFIDENTIAL EMPLOYMENT SERVICE—For Dyers, Chemists, Colorists, Managers, Superintendents and others seeking positions and for employers seeking men. Charles P. Raymond Service, Inc., 294 Washington St., Boston, Mass. Over 45 years in business.

WANTED: SALESMAN - TECHNICIAN, man with broad experience in both selling and technical "trouble shooting" to call on textile mills, also on paper industry, as representative of highly regarded, old established chemical firm. State full details. Write Box 163.

DYESTUFFS WANTED, ALL TYPES, LARGE AND SMALL QUANTITIES, EXCESS INVENTORIES, ALSO INTERMEDIATES AND CHEMICALS. Write Box 171.

Chief Chemist wanted for large tricot underwear plant in South. Must be capable of directing control laboratory and supervising the dyeing and finishing of acetate, nylon, and viscose fabrics. Address in confidence Charles P. Raymond Service, Inc., 294 Washington Street, Boston, Mass. Over 45 years employment service for textile mills.

TEXTILE CHEMIST: Leading chemical manufacturing firm, located Metropolitan area, requires services competent, practical chemist experienced in the throwing and hosiery field for development and technical field work with sales staff. Please state fully experience, salary arrangements and availability. Write Box 177.

PRACTICAL DYER-FINISHER. Well established manufacturers of textile processing chemicals launching international expansion program seek highly experienced dyer-finisher for advisory, technical service and developmental work and to assist sales staff. Give full history and salary expected in first letter. All correspondence held confidential. Write Box 178.

BUSINESS OPPORTUNITY—Chemical salesman experienced chemist desires to establish textile chemical manufacturing business with successful established salesman. Can manufacture complete line of superior textile specialties. Joint capital investment. Confidential. Write Box 183.

Additional Classifieds on Page XXXIII

• CLASSIFIED ADVERTISEMENTS •

JACQUARDS — WE BUY YOUR JACQUARDS SHORTS.
CARDINAL — 557 - 5th Avenue, N. Y. C.
MU 2-0849

POSITION WANTED: Textile Chemist, B.S. in Chemistry, married with family, currently employed in responsible position by one of the largest textile chemical manufacturers. Have acquired broad experience in 3½ years textile laboratory work with this firm but desire connection with progressive company offering greater opportunities. Write Box 180.

WANTED: Print Colorist for plant located on West Coast. Must be experienced in roller printing and processing of silk, acetate, viscose and mixtures. When applying please mention age, marital status, salary expected and experience. Write Box 181.

DESIRABLE OPPORTUNITY
FOR
DEVELOPMENT CHEMIST

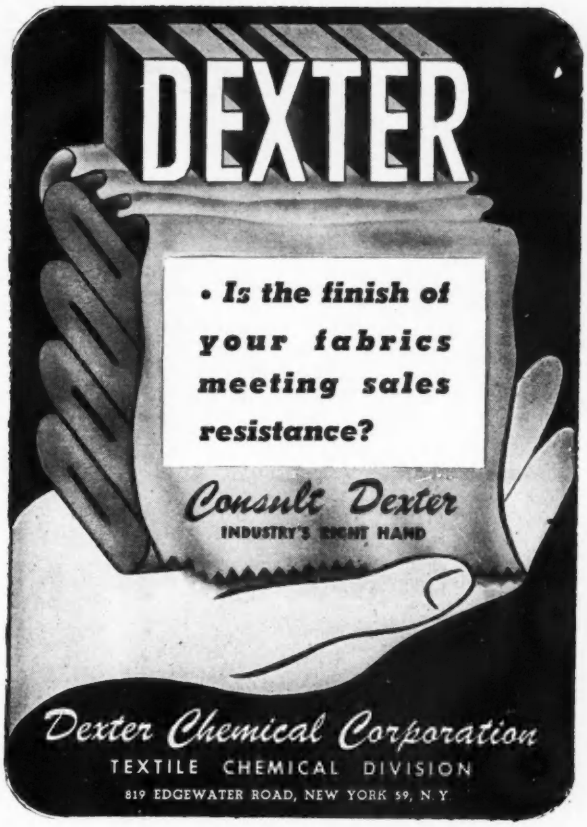
A man with imagination which can be tempered by the limitations of production to put laboratory findings into practical plant operation. Salary commensurate with experience and accomplishment record. In reply please furnish complete data on educational background and previous experience. Ideal age 26-28. Write Box 182.

WANTED: Textile Chemist with highest competence in wool testing and study for long term research program in New England commercial industrial textile research laboratory. Salary $4000. Excellent future for the right man. Send complete history of experience and personal information. Write Box 184.

POSITION WANTED: Experienced Dyer on cotton, rayon, acetate piece goods. Some bleaching and finishing experience. Write Box 185.

WANTED: Young man or woman, to handle the standardization of dyestuffs, chiefly acetates, for a small plant in Northern New Jersey, within metropolitan area. Write Box 186.

Additional Classifieds on Page XXXII


DEXTER
• Is the finish of your fabrics meeting sales resistance?
Consult Dexter
INDUSTRY'S RIGHT HAND
Dexter Chemical Corporation
TEXTILE CHEMICAL DIVISION
819 EDGEWATER ROAD, NEW YORK 59, N.Y.

AQUAKAL 77
A SYNTHETIC
AMINE DETERGENT

•

REPLACES soap or portion of your Soap—for SCOURING piece goods, Cotton, Wool, Rayon, Acetate or Nylon.

•

Brighter colors due to the
PENETRATING and LEVELING
qualities.

•

Excellent for Soaping Vats—
not affected by hard water.

Kali MANUFACTURING COMPANY
Manufacturing Chemists
427 MOYER ST. PHILADELPHIA 25, PA.

COTTON: In the kier, Pine Solvent XX brings the liquor in contact with every fiber, leaves uniform bottoms that dye and finish more evenly. Boiling time is cut. Fibers are softer, fuller, more resistant to age-discoloration.

WOOL: Pine Solvent XX is valuable in raw-wool scouring . . . irreplaceable in fulling. From the raw stock it produces clean, soft, really white wool in prime condition for storage or further processing. In the fulling mill, it cuts time as much as 30% . . . costs no more . . . helps you meet contract delivery dates on time.

RAYON: In boiling off, Pine Solvent XX rapidly emulsifies gelatinous materials . . . is safe for the most delicate fabrics. Used in dyeing, it makes the fabrics wet out and sink quickly.

DYEING: Pine Solvent XX makes dye liquor penetrate the hardest fibers and heaviest seams. It gives an even, level deposit of dyestuff of uniform depth throughout every fiber. Loose dyestuff and impurities are suspended for washing out completely.

PRINTING: In printing paste, Pine Solvent XX wets pigments thoroughly, disperses them evenly, and holds them in suspension without agglomeration until the design is on the fabric. Designs are sharp, colors bright and clear, no specks are formed.

CUT TIME AND COST—IMPROVE RESULTS IN ALL WET PROCESSING WITH BURK-SCHIER PINE SOLVENT XX

Burk-Schier Pine Solvent XX Reduces Surface and Interfacial Tensions . . . Wets, Penetrates, Suspends, Disperses . . . Aids Detergents and Dyes. A Little Does a Lot and Does It Well.

SCOURING WETTING PINE-SOLVENT BLEACHING DYEING

BURKART-SCHIER CHEMICAL CO.

BURK-SCHIER CHATTANOOGA, TENNESSEE BURK-SCHIER

PENETRANTS • SOFTENERS • SOLUBLE OILS FINISHES

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The KNITTING ARTS NUMBER

AMERICAN DYESTUFF REPORTER

will be published on

APRIL 21st

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Technical articles of particular interest to the HOSIERY INDUSTRY will be published.

•

A description of the products displayed by the exhibitors will also appear.

•

The advertising forms close on March 28th to permit us to have copies available for distribution at our booth in the show.

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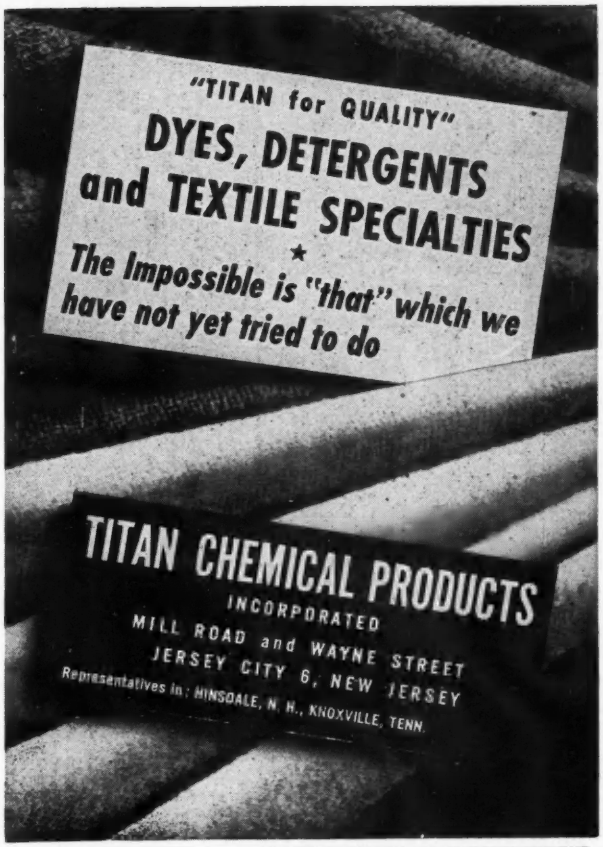
Better reserve your space now!


"TITAN for QUALITY"
DYES, DETERGENTS and TEXTILE SPECIALTIES
★
The Impossible is "that" which we have not yet tried to do
TITAN CHEMICAL PRODUCTS
INCORPORATED
MILL ROAD and WAYNE STREET
JERSEY CITY 6, NEW JERSEY
Representatives in: HINSDALE, N. H., KNOXVILLE, TENN.

QUALITY RICHMOND PRODUCTS

Less Handling with

AFTER CHLOR

Eliminates 3 to 5 Handlings

Bleach with Hypochlorite Rinse and Use

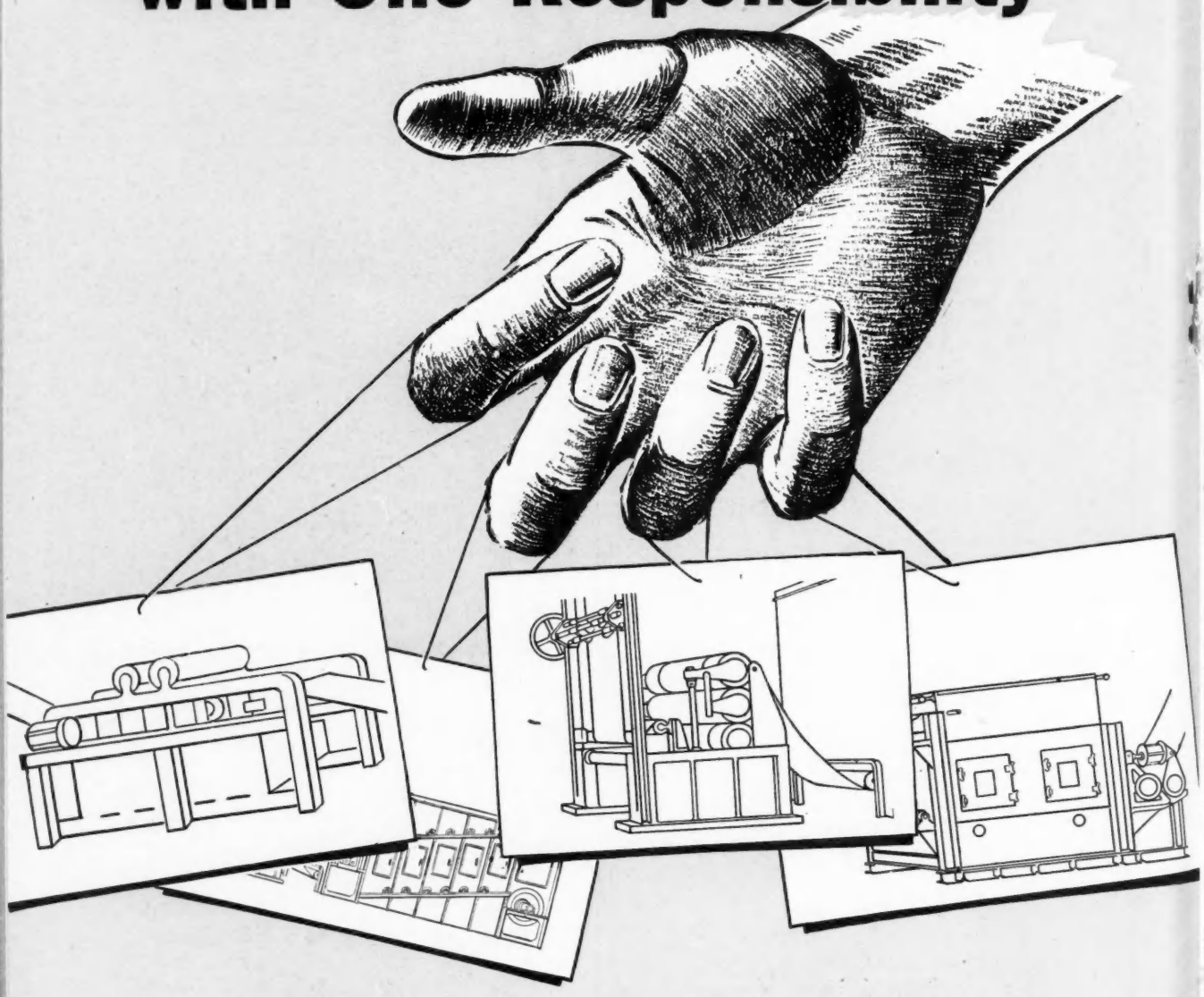
AFTER CHLOR

THAT'S ALL!

Write for FREE Sample

RICHMOND OIL, SOAP & CHEMICAL CO., Inc.
1041-43 FRANKFORD AVE., PHILADELPHIA 25, PA.

Add 1 Machine or 10 with One Responsibility



Add a jig, add a pad. Set up a fast, modern continuous bleaching range. Or equip a complete bleaching, dyeing and finishing plant . . .

The mill that is standardized on Butterworth equipment gets coordinated results plus undivided responsibility for all of their machines in the wet end of textile finishing. Production is up and costs are down *or Butterworth knows the reason why.*

Only Butterworth offers this wide experience, based on 127 years of service to the Textile Industry. No matter what your equipment problem may be, Butterworth has the design and manufacturing experience to meet your needs. Let us give you full details.

Butterworth

H. W. Butterworth & Sons Company, Philadelphia 25, Pa.

TEXTILE FINISHING MACHINERY COMPANY DIVISION, Providence, R. I. - 1211 Johnston Bldg., Charlotte, N. C. - W. J. Westaway Co., Hamilton, Ont. ARGENTINA: Storer & Cia., Buenos Aires - AUSTRALIA: Noel P. Hunt & Co., Ltd., Melbourne - BELGIAN CONGO: Paul Pflieger & Co. - BOLIVIA: Schneiter & Cia., Ltda., La Paz - CHILE: Schneiter & Cia., Ltda., Santiago - COLUMBIA: C. E. Halaby & Co., Medellin - CUBA: Thos. F. Turrull, Havana - ECUADOR: Richard O. Custer, S. A., Quito - FRANCE: Georges Campin, Le Perreux, Seine; Rene Campin, Sceaux, Seine - MEXICO: I. Slobotzky, Mexico, D. F. - MIDDLE EAST: Arlind Corporation - NORWAY: Dr. Ing. Otto Falkenberg, Oslo - PERU: Custer & Thommen, Lima - SOUTH AFRICA: Texmaco, Johannesburg - SWEDEN: Elof Hansson, Goteborg - URUGUAY: Storer & Cia., Ltda., Montevideo - VENEZUELA: Herbert Zander & Co., Caracas.

She wears DuraBeau *finished hosiery for lasting beauty*

Reg. U. S. A. and Canada

. . . that is why women are always so conscious of their hosiery. To a woman, snags, water spots, runs, shiny hosiery are more deflating than last year's hat!

DuraBeau Finishes impart that smoky, dull, gossamer look, that makes hosiery so beautiful and legs so lovely. It is a Finish that goes right to the very heart of the fibre . . . a Finish that gives added wear, — and snag resistance, water and spot repellency. It is a true "film of protection." It is the Finish that a well-groomed woman always looks for . . . always wears.

SCHOLLER BROS., INC.

Mfrs. of Textile Soaps, Softeners, Oils, Finishes • Collins & Westmoreland Sts., Phila. 34, Pa. • St. Catharines, Ont., Can.

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DO NOT CIRCULATE

YES!
YOU CAN MEET
THE DEMAND FOR

IMPROVED

STAIN RESISTANCE

WATER REPELLENCE

WITH

PARAMUL 115

A Cyanamid Textile Finish for

COTTON
RAYON
LINEN
WOOLENS

DO NOT CIRCULATE
DO NOT CIRCULATE

PARAMUL** 115 Water Repellent is an aqueous solution of wax and aluminum salts that imparts superior water repellency and stain resistance to a wide variety of fabrics—cotton, rayon, linen and wool. It is equally suitable for treating such fabrics for outerwear or equipment purposes. Easy and economical to use. Odorless and harmless to skin or fabric. Stable over a wide range of temperatures, it can be stored safely for long periods of time. In its ability to meet a specific need precisely, PARAMUL 115 is typical of the many Cyanamid products developed for use in the textile industry.

CALL CYANAMID! The services of Cyanamid's technical service staff backed by our extensive textile research facilities are ready to assist you to achieve superior results . . . *economically* . . . in water repellence and stain resistance for your fabrics.

Industrial Chemicals Division

AMERICAN CYANAMID COMPANY

AMERICAN CYANAMID COMPANY PRODUCTS

30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY ARE... Penetrants, Softeners, Finishes, Sizing Compounds, DECERESOL* Wetting Agents, PARAMUL**115 Water Repellent, and other Specialties and Heavy Chemicals. For low-cost chemical equivalent of distilled H_2O...FILT-R-STIL* Demineralizing Units.

*Reg. U. S. Pat. Off. **Trade-mark